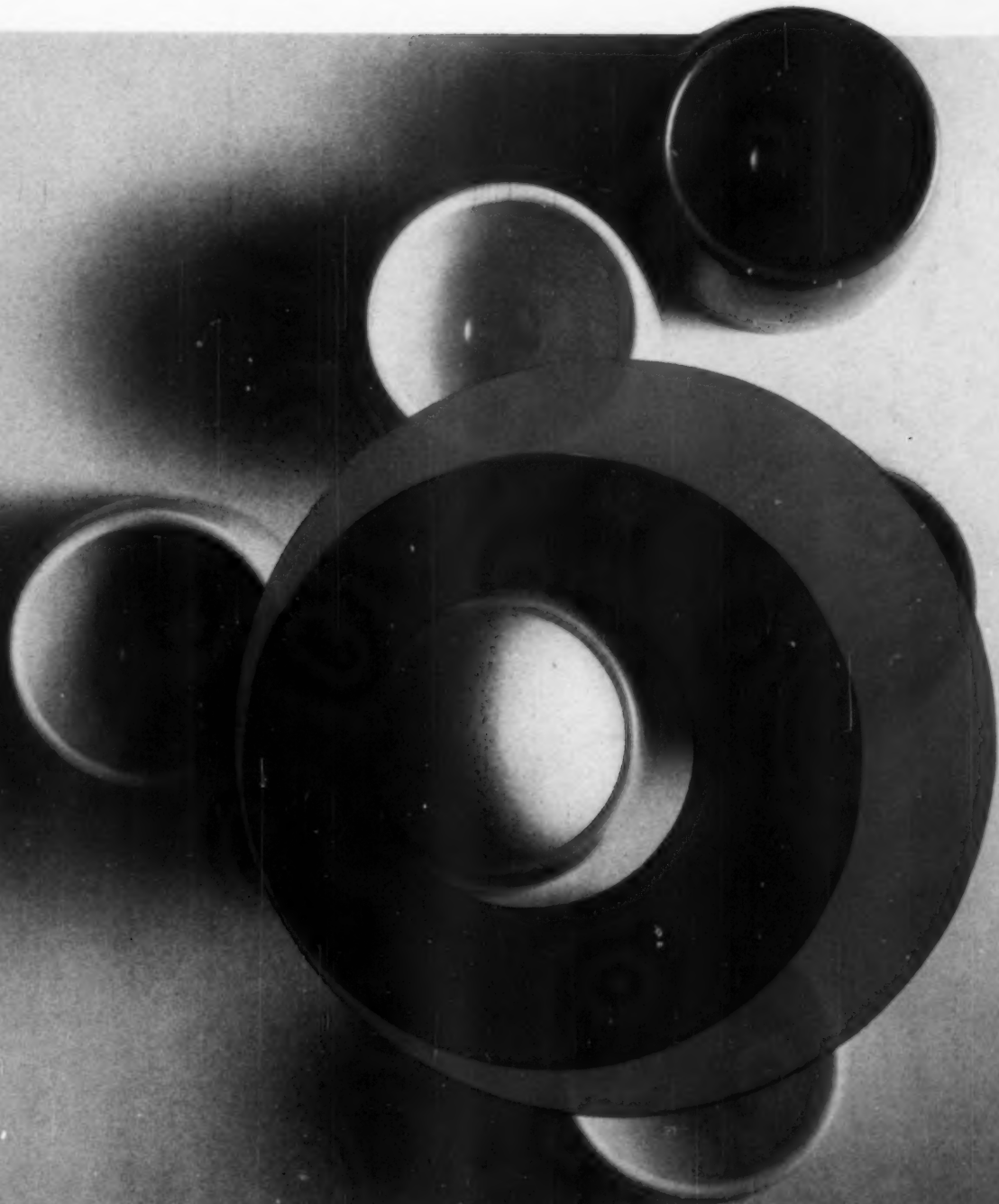
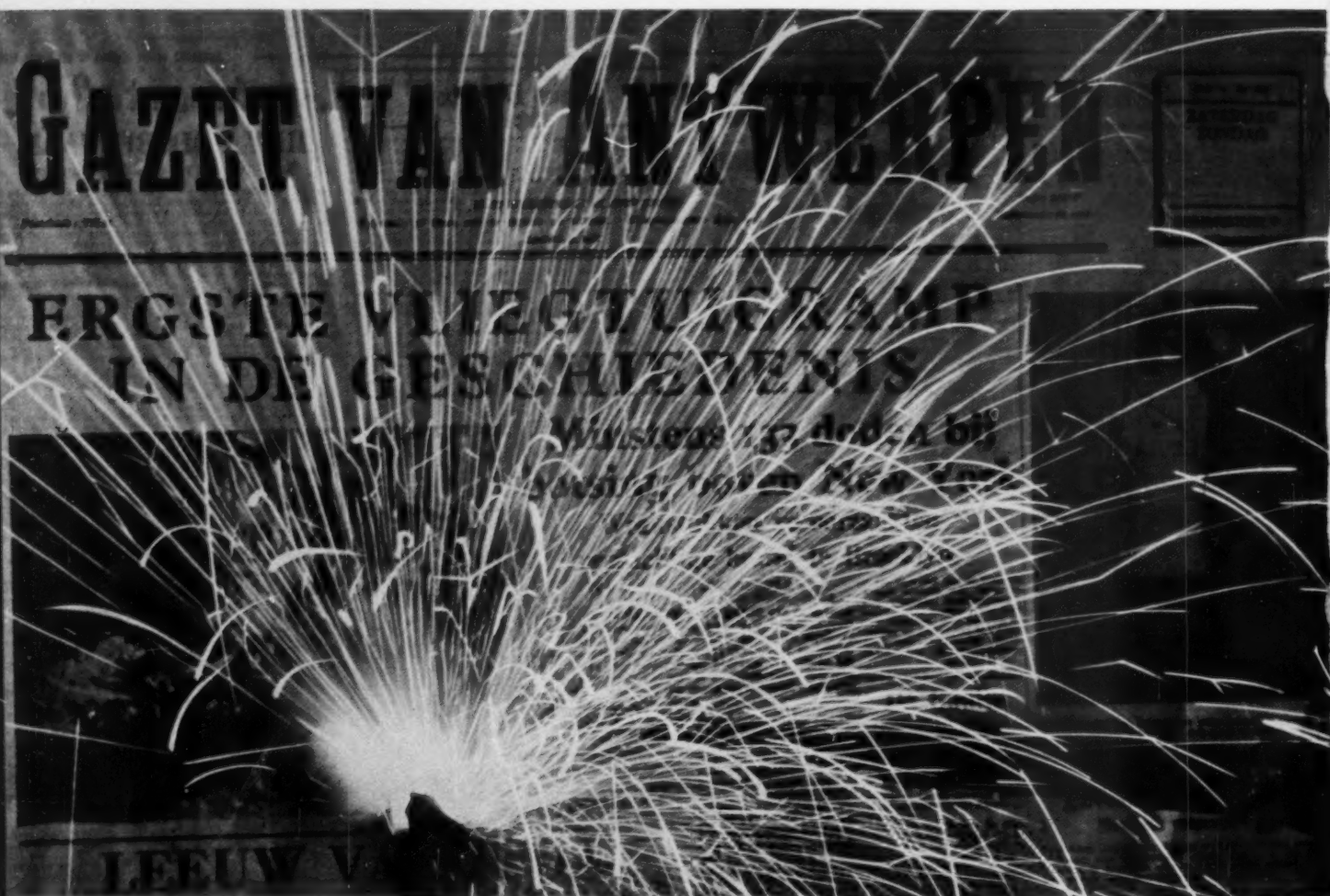


Design

Council of Industrial Design 155 November 1961 Price 3s



Flemish as spoken in Wolverhampton



Lit by the spluttering, steely-blue flames of welding arcs, the intricate cooling system of a nuclear reactor takes shape in Northern Belgium. For the 11,000th time, in the darkened inspection booth of a factory in the English Midlands, an X-ray negative is presented for close scrutiny, a head bends over it, and a hand writes a curt 'O.K.'

Sixty tons of gleaming aluminium are the link between the Belgian Atom Town at Mol and the English factory at Wolverhampton operated by I.C.I. — Britain's leading chemical company and an expert fabricator of non-ferrous metals. For the nuclear reactor BR2

at Mol, the cooling water needs to be contained in a labyrinth of aluminium pipes, made with perfect precision and faultlessly welded. I.C.I. — no mean contributor to Britain's nuclear projects — undertook the job, confirming the perfection of their work with 11,000 X-rays and sending a special team of welders to install the pipework at Mol. When it's a question of making special assemblies in conventional metals, or supplying special metals such as zirconium, hafnium and beryllium for nuclear engineering projects, I.C.I. speaks a language that is well understood everywhere.

*The influence of I.C.I. research and production
is felt today in every corner of the globe*

Imperial Chemical Industries Ltd., London, S.W.1



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Single Shell
stacking and
linking chair P.501



Double Shell skid chair
PD.502

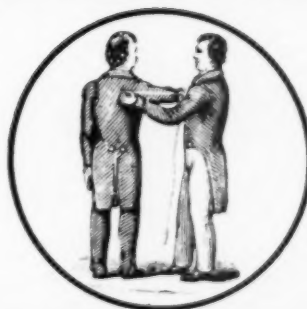


P.503. Double Shell
aluminium chair PD.503



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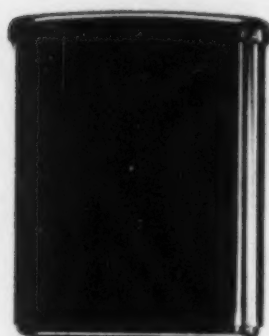
A SUBSIDIARY OF BTR INDUSTRIES LIMITED



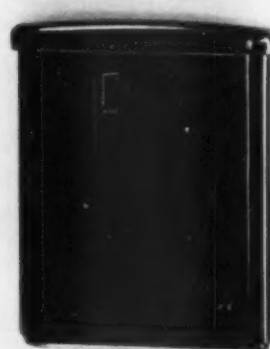
FIESTA

m e l a m i n e

DESIGNED BY RONALD BROOKES, FSIA



BROOKES AND ADAMS LIMITED · BIRMINGHAM





From left to right: armless chair, number 137; retail price £25.17.0.; armchair 168: £37.18.0.; solid teak table 534: £22.7.0.; 8 ft. settee 168/4: £99.12.0.; stool 131: £19.17.0.; armchair 130: £36.13.0.; C. W. F. France & Son Ltd., 18 New Bond Street, London, W.1. Telephone: Hyde Park 4757

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sheer benevolence its comfort creates...and
love the way it looks furniture by france & son**



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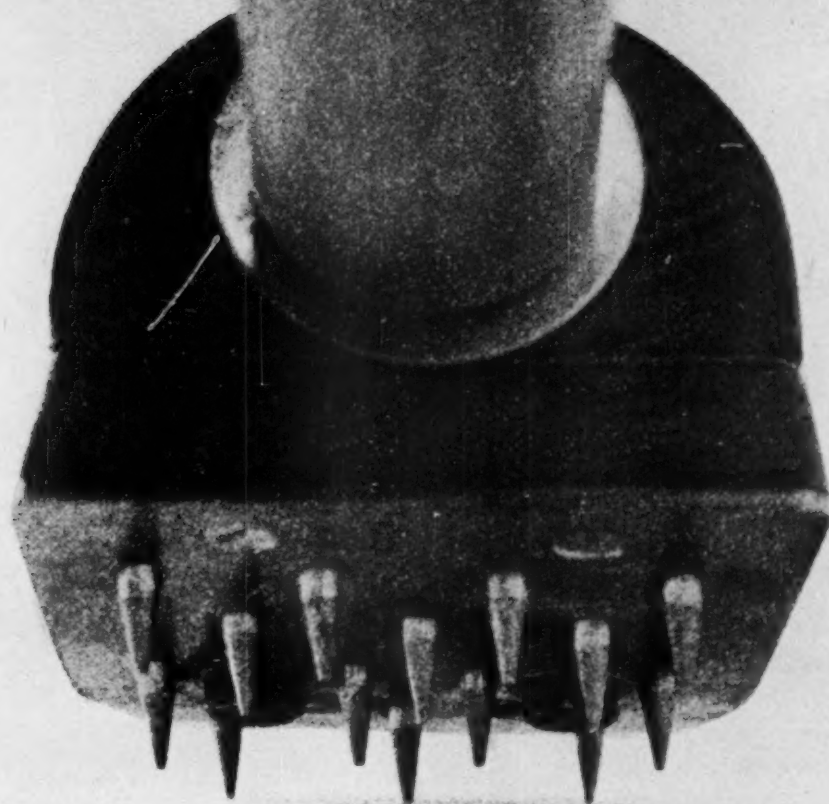
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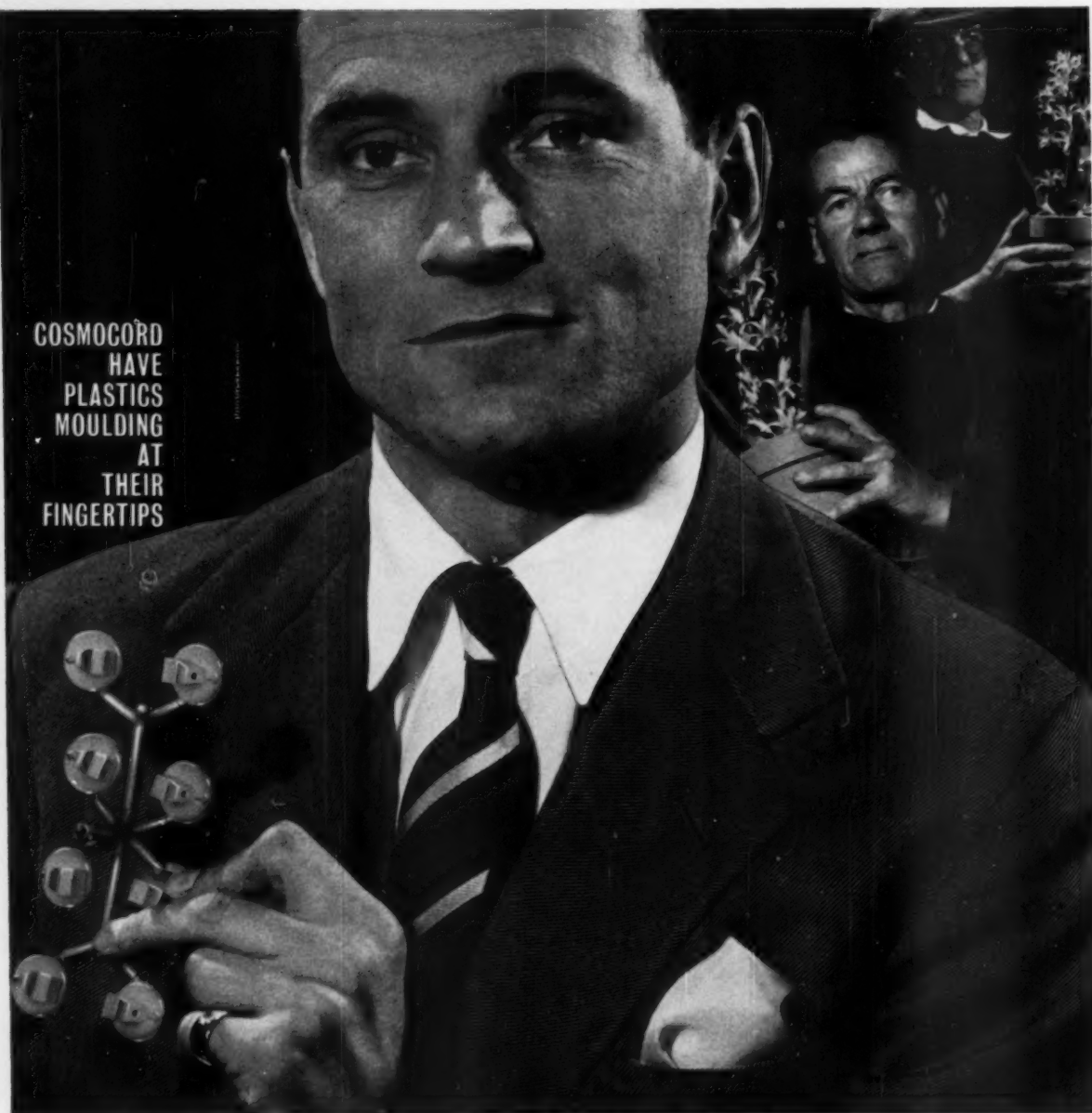
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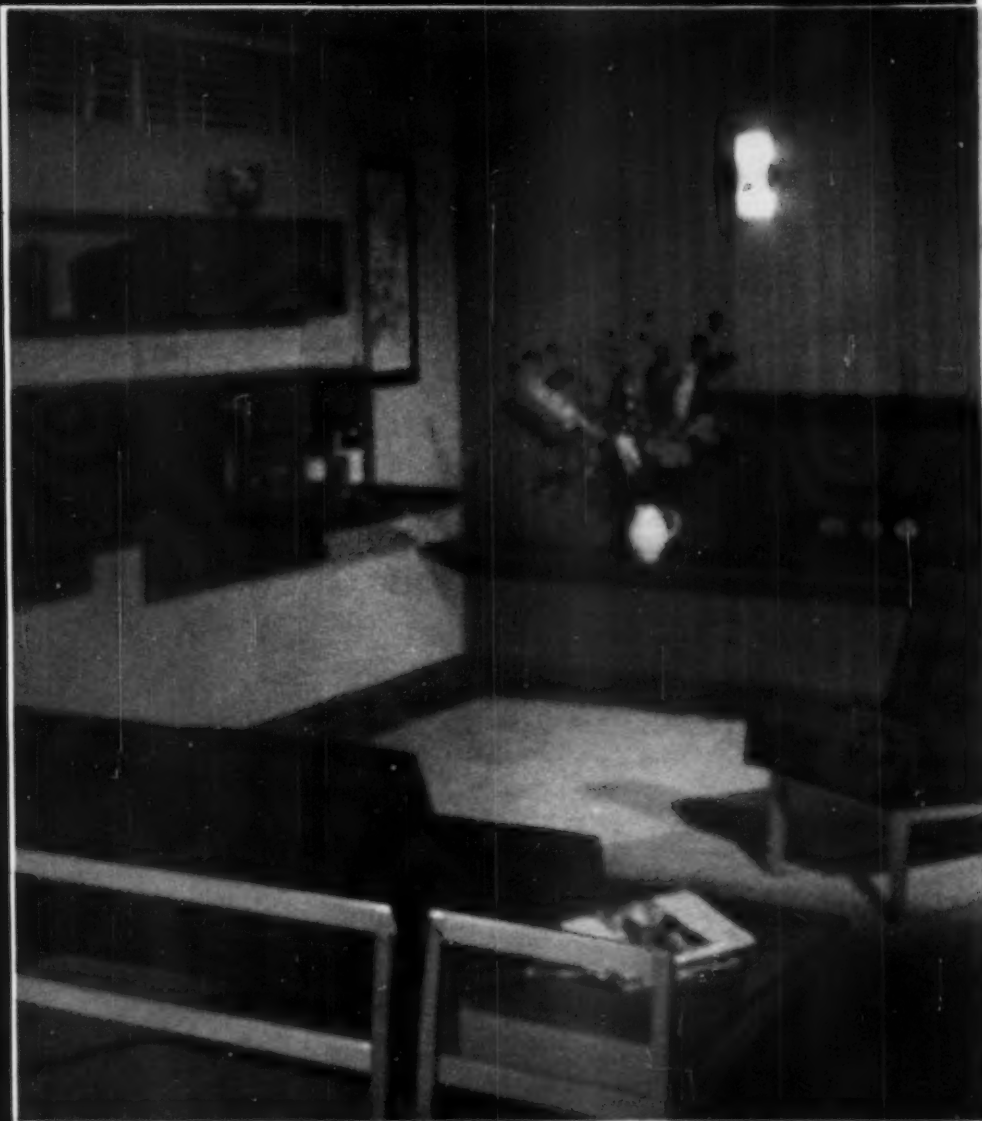
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Illustrated: 3-gang unit with off-white nylon switches and satin-chrome plate.

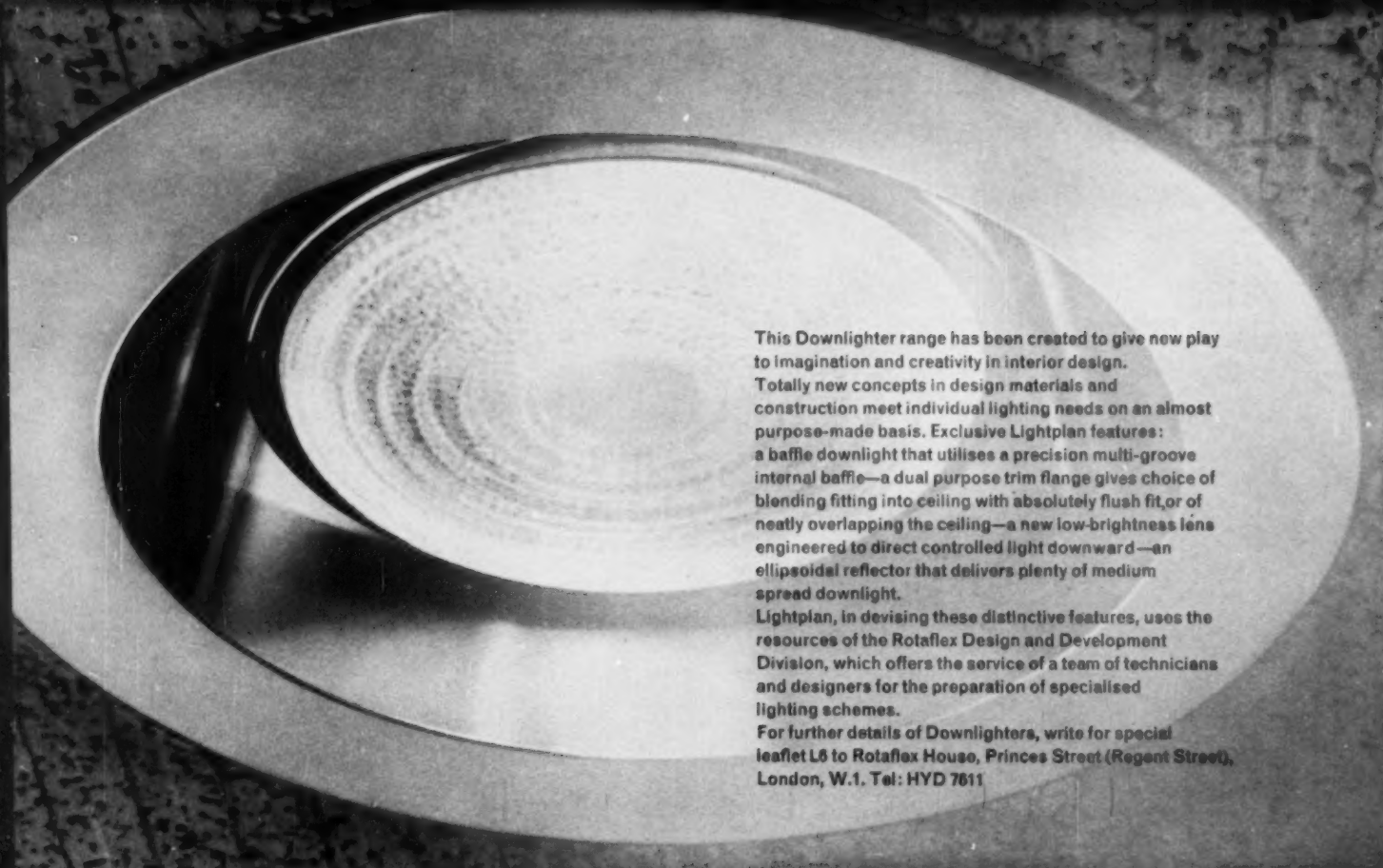
*Write to **S&C** (Installation Equipment) Limited for publication S.5377, describing the full "Mutac Clipper" range.



that's the New Approach of

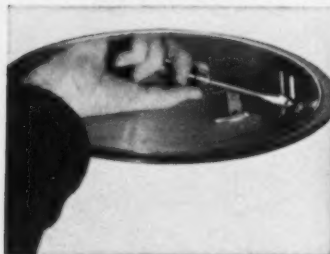
S&C.

S&C (INSTALLATION EQUIPMENT)
LIMITED
FOUR ASHES, WOLVERHAMPTON



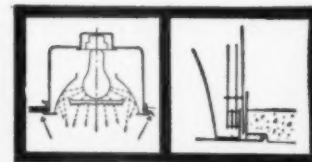
This Downlighter range has been created to give new play to imagination and creativity in interior design. Totally new concepts in design materials and construction meet individual lighting needs on an almost purpose-made basis. Exclusive Lightplan features: a baffle downlight that utilises a precision multi-groove internal baffle—a dual purpose trim flange gives choice of blending fitting into ceiling with absolutely flush fit, or of neatly overlapping the ceiling—a new low-brightness lens engineered to direct controlled light downward—an ellipsoidal reflector that delivers plenty of medium spread downlight. Lightplan, in devising these distinctive features, uses the resources of the Rotaflex Design and Development Division, which offers the service of a team of technicians and designers for the preparation of specialised lighting schemes. For further details of Downlighters, write for special leaflet L6 to Rotaflex House, Princes Street (Regent Street), London, W.1. Tel: HYD 7611

rotaflex lightplan downlighter



floating lens

Part of the Downlighter range: a fully-recessed lighting unit incorporating Lightplan golden floating coloured lens, recessed above the ceiling line into a highly efficient gold bright anodised reflector. The soffit ring, lens and reflector are attached to the main housing by means of torsion springs. Re-lamping requires no tools—simply pull down soffit ring and immediate access is possible—no fixing screws are visible.



- 1 Dual-purpose trim flange used as a plaster ring is fixed by plaster lugs wired to metal lathing. The plaster retainers act as spacers and lock the plaster ring in position (for dry ceilings reverse dual-purpose trim flange).
- 2 Dual-purpose trim flange flush with ceiling line in completed plaster work. The body of the fitting is shown connected to the electrical installation ready for fixing.
- 3 Positive fixing for the body is provided in the dual-purpose trim flange. Slots permit accurate levelling with trim flange.
- 4 Fitting illuminated, painting in progress. Uninterrupted ceiling area (no cutting-round the soffit ring) ensures a fast, clean job.
- 5 Building work complete, soffit ring and interior of the fitting fixed with torsion springs, no tools required. Gasket provides effective light and air seal (flange and interior fitting can be installed in under five seconds with the torsion spring system).
- 6 High speed fixing, end of job installation, preserves clean, factory-fresh appearance.

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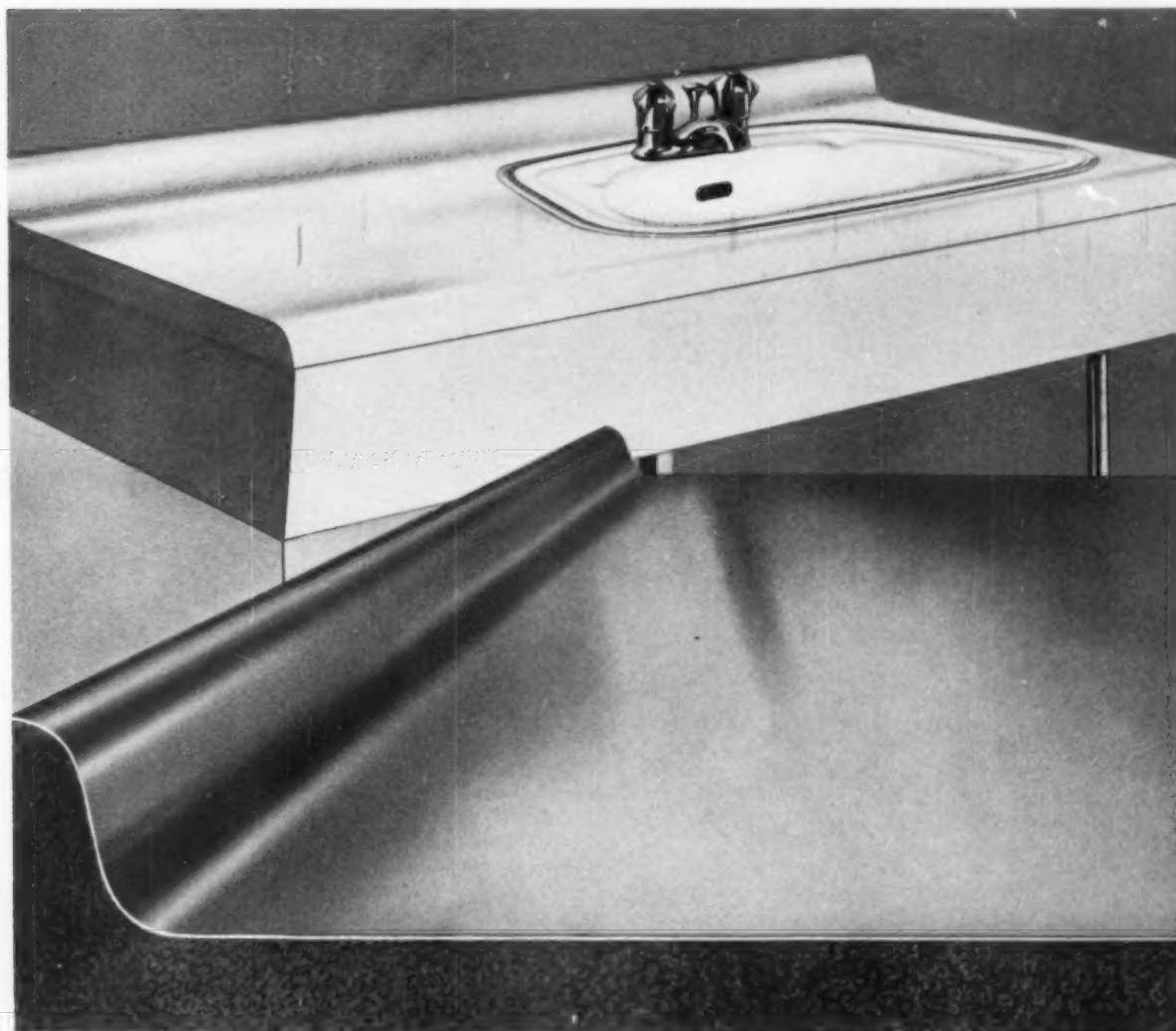
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VISUALLY, curved surfaces have brought a new freedom of line, a new aesthetic appeal, that stimulated the designers and excited the users.

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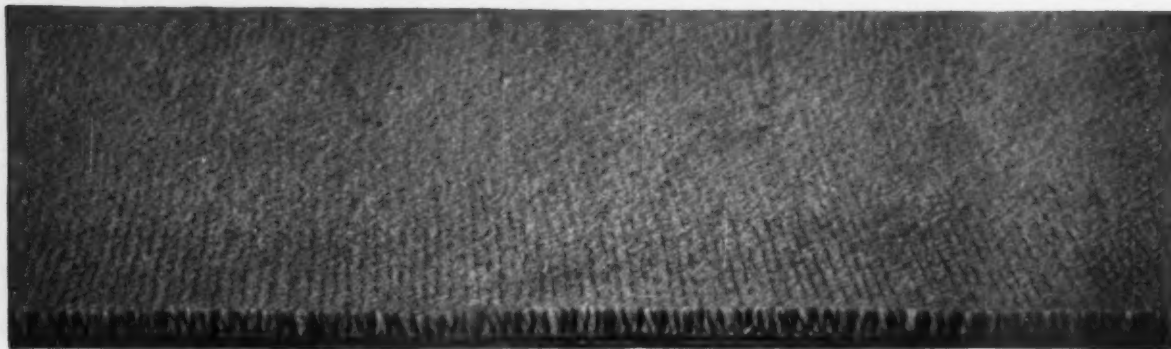
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Barbour Index File Number 193



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BUT NOT ITS AGE...

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New Acrilan 15 carpet fibre has been specially developed by Chemstrand Limited for the carpet industry. Top manufacturers are using this high-performance fibre because its "built-in" characteristics make it ideal for use in both domestic and contract quality carpets.

Carpet with Acrilan 15 is made to master crushing and stains, made to stay luxurious and new-looking longer.

Because carpet made with Acrilan 15 fibre has a low absorbency—stains and dirt stay on the surface—it is easily spot-cleaned or shampooed.

Also, carpet made with Acrilan 15 is more resilient and

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Carpet of Acrilan 15 will stay beautiful for longer than any comparably priced carpet you have ever had before.

LOOK FOR the Crossley 'Broadway' Axminster range, 100% Acrilan pile, available on the Crossley cut-length broadloom service.

ACRILAN
15



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Acknowledgements to Ind Coope Ltd. & Korkoid Decorative Floors.

Ask any architect—he will tell you that today linoleum is one of the most versatile weapons in his creative armoury. Its applications are so wide. It expresses brilliantly the mood of any decorative theme—contemporary or period. And a constant flow of new colours and styles gives scope for endless variety of 'personalised' and novel designs. In other ways, too, linoleum belongs to modern living. It is so easy to care for—so quick to clean. It is quiet to the tread and no flooring equals linoleum for long wear . . . Always plan for linoleum. Illustrated left: The Leofric Hotel, Coventry, makes extensive use of today's finest flooring—linoleum.

"THELMA" stands for THE LINOLEUM MANUFACTURERS' ASSOCIATION, 127 VICTORIA STREET, LONDON, S.W.1. For further information write to the Association or to any of the following members: BARRY OSTLER & SHEPHERD LTD., Kirkcaldy - DUNDEE LINOLEUM CO. LTD., Dundee LINOLEUM MANUFACTURING CO. LTD., 6 Old Bailey, London, E.C.4. MICHAEL SAIRN & CO. LTD., Kirkcaldy - NORTH BRITISH LINOLEUM CO. LTD., Dundee - SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LTD., Falkland, Fife - JAS. WILLIAMSON & SON LTD., Lancaster.





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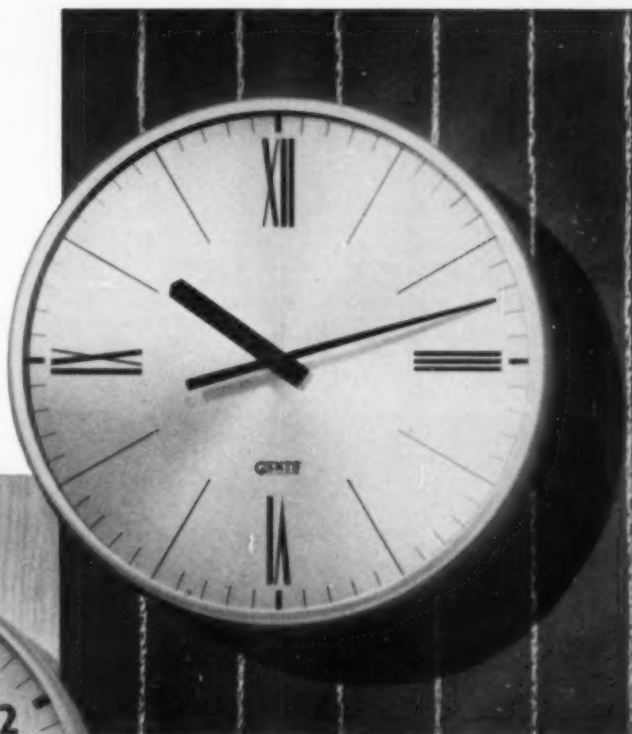


Maximum legibility and good taste are combined in the Gents wall clocks shown here.

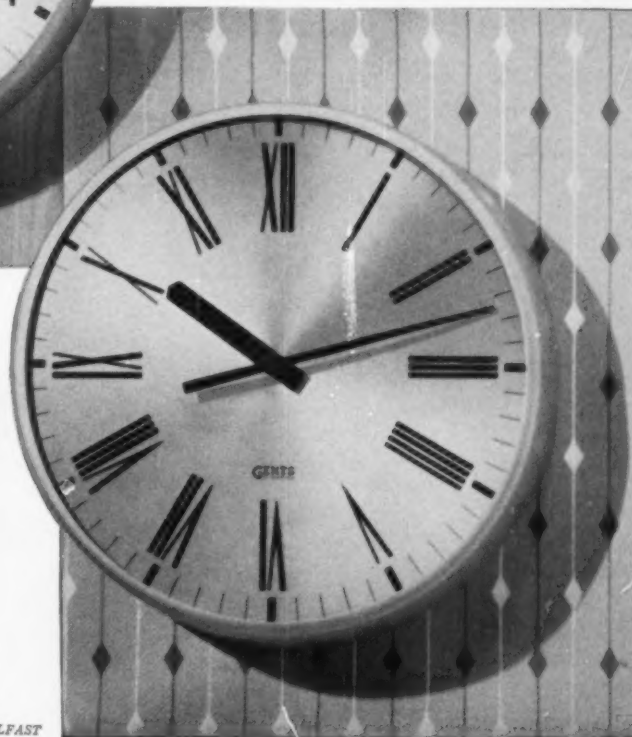
Styled by a leading industrial designer they provide a choice of standard models which fit happily into present-day surroundings and décor.

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All are available for operating either on A.C. Mains or as part of a Master Clock System.



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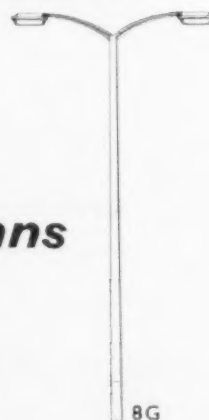


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Points will be awarded for
Originality of design conception as a whole.
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Suitability and reasonable availability of other materials employed.
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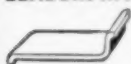
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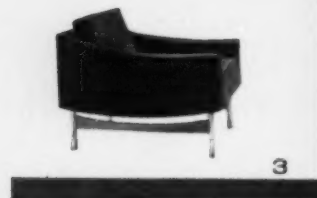
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2



3



4



5



6



7



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Cintique

CHAIRS & SETTEES

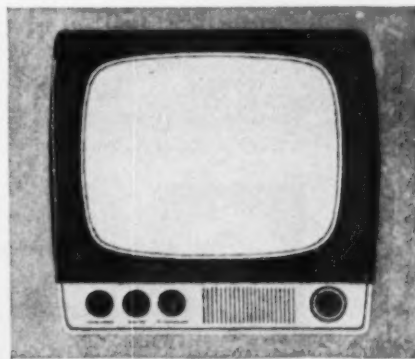
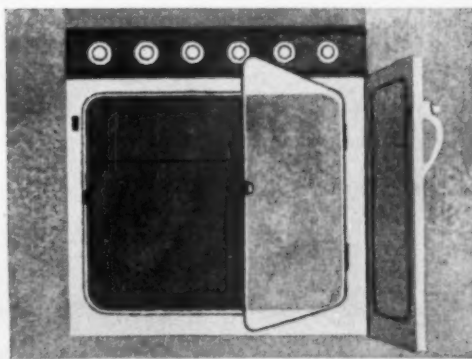
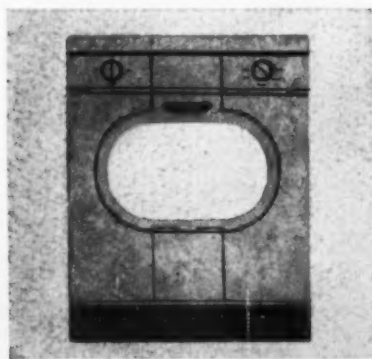
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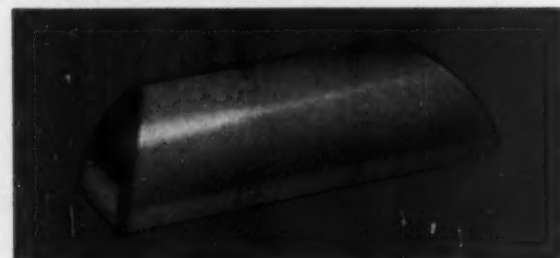
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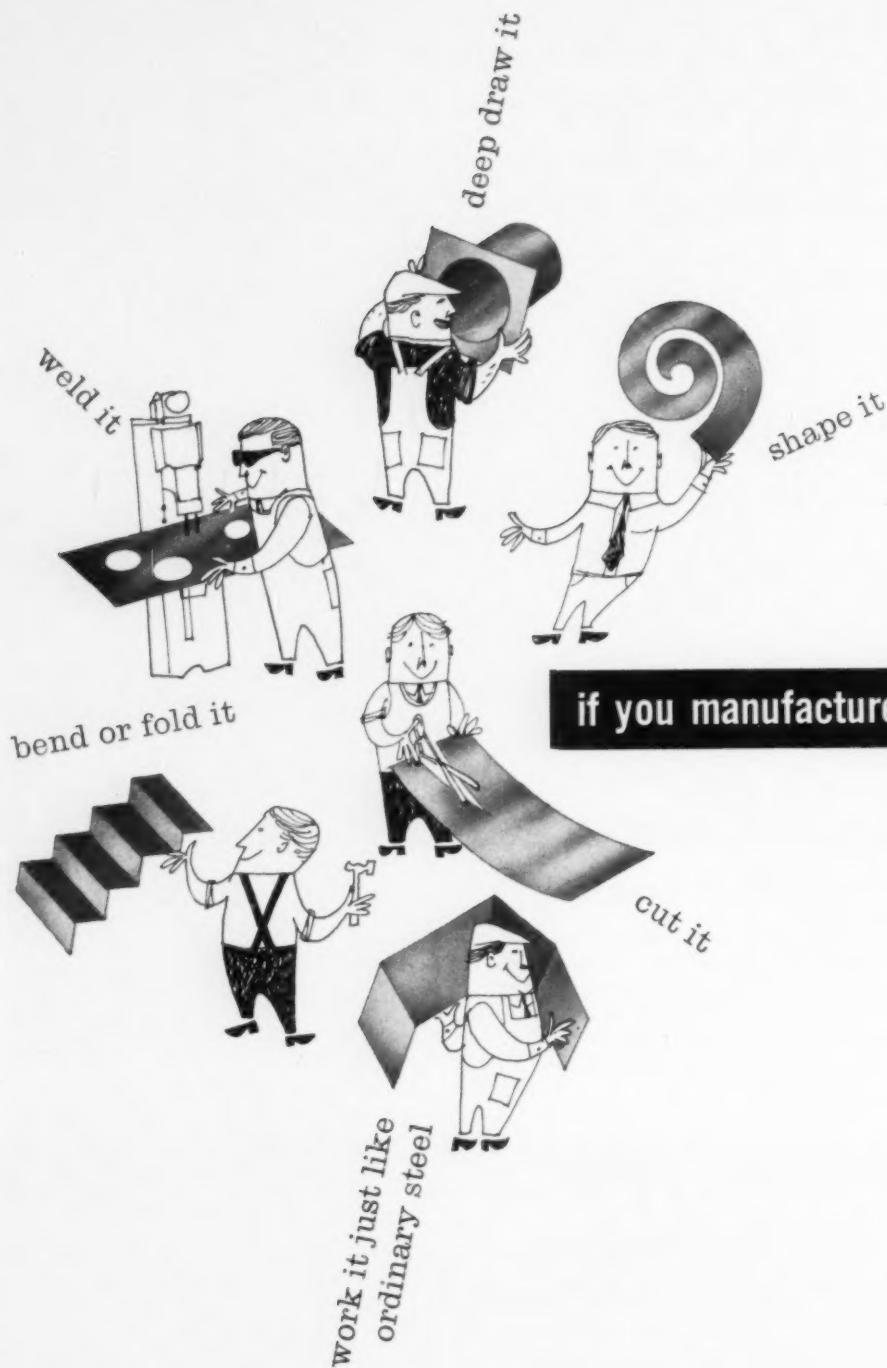
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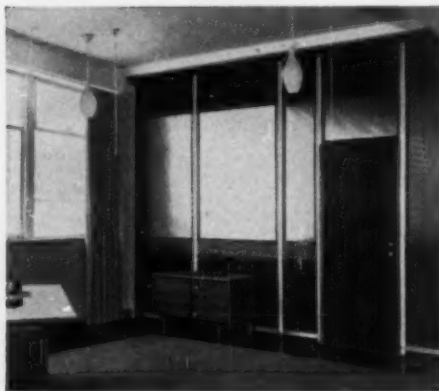
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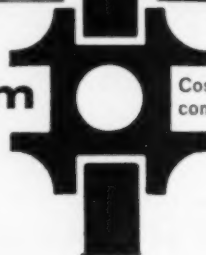
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AP2

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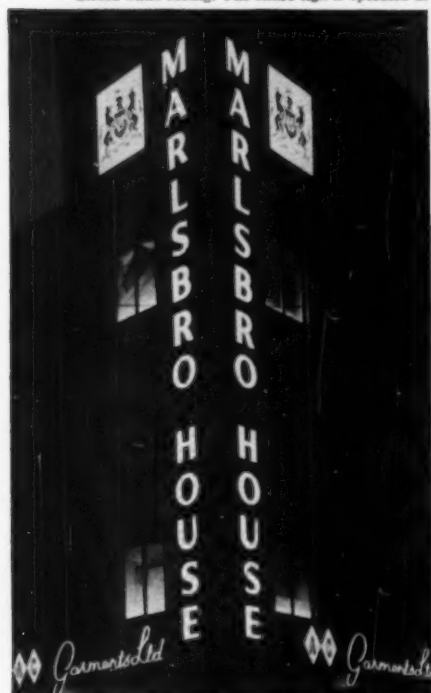
Quartet in brilliant 'Perspex' by Claudgen



Bristol Cigarette sign made for W. D. & H. O. Wills of Bristol and installed in Shaftesbury Avenue. The letters of "Bristol" and "Tipped Cigarettes" have opal 'Perspex' faces and are internally illuminated by white tubing. Main panel of box is opal 'Perspex' with slogan in black 'Perspex'. Illumination is by 30 lines of Cleora white tubing. The entire sign is operated in a flashing sequence.



Double-sided sign on premises of Lang Brothers Ltd., Distillers, Oswald Street, Glasgow. The panels are made from clear 'Perspex', signpainted in detail. After signpainting, a coating of white diffusing paint was applied. Illumination is by vertical lines of Cleora fluorescent white tubing.



"Marlbro House" sign on the premises of A. G. Garments Ltd., Newton St., Manchester 1. The letters of "Marlbro House" have opal 'Perspex' faces with returns of 762 Blue 'Perspex'; diamond shaped boxes have main panels of opal 'Perspex' with letters of 762 Blue 'Perspex'. The box signs bear an emblem cut out of yellow and blue 'Perspex' with an opal background. All signs lit by Cleora tubing.



"Smoke Player's" sign made for John Player & Sons of Nottingham and installed in Piccadilly Circus. The replica of the Player's Navy Cut cigarette packet is made from clear 'Perspex' on which the detail has been signpainted by hand. It is lit by white tubing and remains constantly alight, while the "Smoke Player's" slogan flashes on and off.

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P561

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42 Traditional or modern?

Britain's position in world markets has never before been so important, and the creation of a progressive, modern image would seem to be the way to increase sales abroad in the face of stiff competition. But Britain is still associated with traditional and reproduction designs. In the belief that a modern outlook is essential to Britain's prosperity the CoID has always concentrated on showing modern designs in The Design Centre. Both opposition to and support for this policy are summed up in this symposium of views from designers and industrialists on the question "should The Design Centre show reproductions of good traditional designs?"

48 Britain in Europe

49 Plastics *Vivian Edwards*

This sixth survey outlines the development of the mushrooming plastics industry, and to indicate the quality of overseas competition the illustrations include some foreign products which were exhibited at the recent plastics exhibition. A reference table listing the basic characteristics of the families of plastics, together with handling techniques also is included

62 Balance and lucidity

A precision balance represents a new development in technical sensitivity and visual simplicity

64 Overseas review

Sweden: domestic storage investigated *Dorothy Meade*

A summary of a book which details Swedish research into consumer needs. The work concerns storage space in the home and indicates the possible dimensions for a range of modular furniture based on the results of the studies

USA: two leaves on Aspen *Milner Gray*

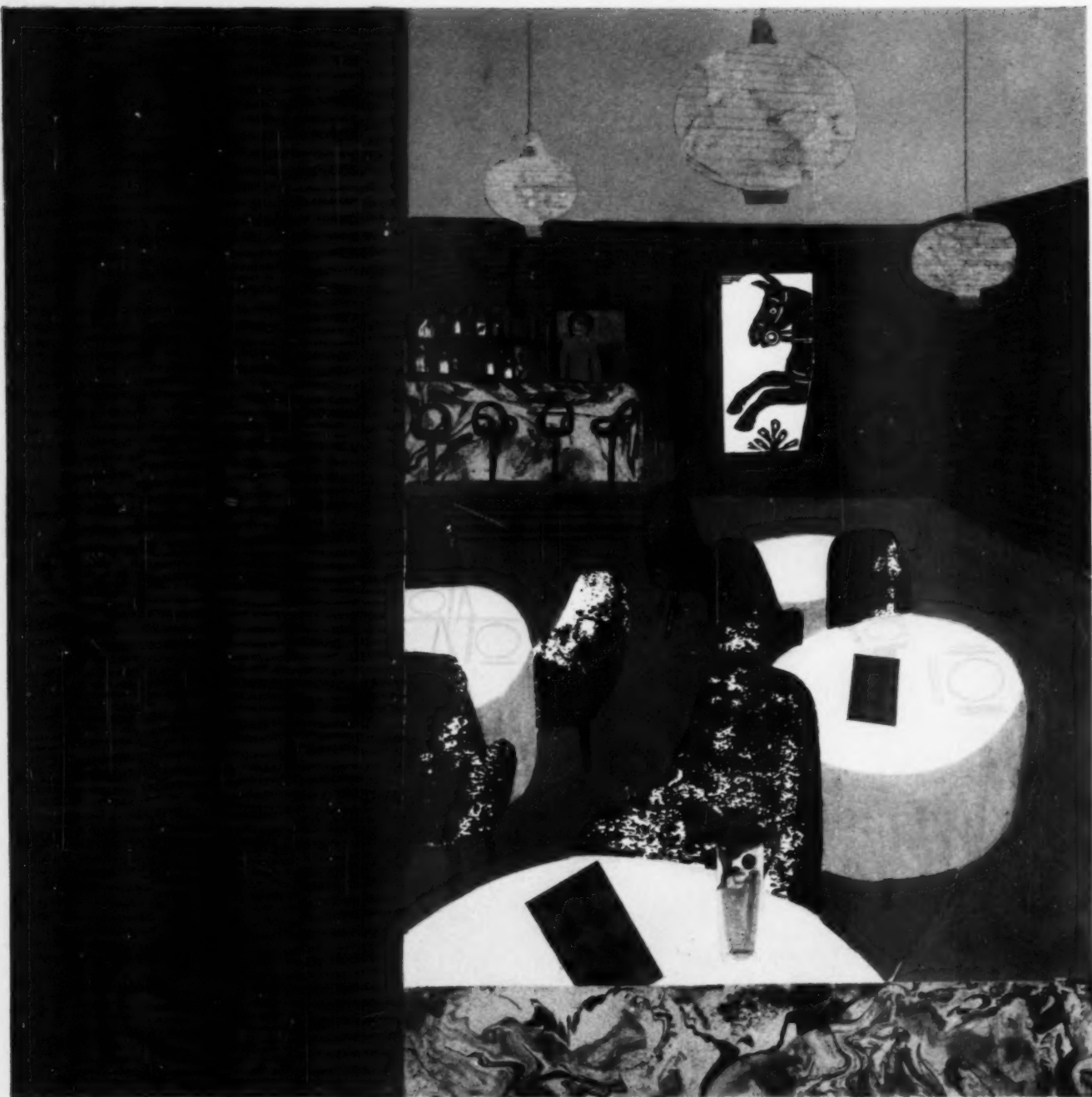
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quality is **NOT** enough

Some critics of this country like to refer to 'British quality' as one of those nice, comfortable but slightly unrealistic things that have come down to us from grandad's day, like the coloured maps of the world pleasantly dominated by red patches. Certainly there is no cause for the complacent view that high standards of quality are an automatic accompaniment of everything that comes out of British factories.

It was all the more heartening, therefore, to learn that British quality is still highly respected abroad. We were talking to a much travelled merchandising consultant during one of his brief returns to base in London. On his recent world tour he was surprised by the eagerness of foreign businessmen, from all quarters, to buy goods of a quality which they believed could only be obtained from this country.

There was only one snag in this flattering situation – our quality is not being matched by the standard of our designs. Our merchandising friend went on to tell us the story of a young textile designer who called at a factory with her folio of work. "Excellent", said the manufacturer, "but your designs are too good for this country. Why don't you take them to Sweden? – they would go down very well there".

Whether or not this grim story is true, the underlying attitude of mind, according to the merchandising consultant, is only too real and is widespread among those industries catering for domestic markets. Our traditional products are magnificent, but the reason that foreign buyers do not want our modern designs is simply because they are not good enough. If we could match our quality with first-rate design we could beat the world.

We asked him if he thought the design talent was available in this country. He referred to the recent exhibitions of students' work at the Royal College of Art and the LCC Central School of Arts and Crafts. "If they are anything to go by," he said, "there is plenty of talent, but what is lacking is a willingness to give designers a chance to produce really creative experimental work".

The interesting aspect of these forthright comments is that they could hardly be described as airy fairy ideas dreamed up in a vacuum, but are based on direct experience of talking to buyers from as far afield as New York and Tokyo. The CoID has frequently argued the need for a more forward looking attitude to design, particularly among the craft based industries. It is industry's challenge to these "unrealistic" arguments that prompted our symposium which begins on page 42 of this issue. J.E.B.



POINTERS

Irish weapon

The need for Britain to match the high quality of her manufactured goods with imaginative, forward looking designs is discussed in this month's leading article on page 39. Further evidence to support this comes from one of our industries whose end product has become, throughout the world, synonymous with good quality – namely Irish linen. R. H. Crawford, managing director of one of the leading firms in the Irish linen industry, Thomas Somerset & Co Ltd, Belfast, is particularly concerned about the invasion of our markets by countries behind the Iron Curtain with comparable products at prices far below anything we could hope to compete with.

Mr Crawford believes that if we are to hold our own in these adverse trading conditions, we can only do so by keeping several jumps ahead of our competitors in design. "Design", he says, "is the chief weapon in our fight against Iron Curtain merchandise". These are not idle words. Thomas Somerset has already demonstrated the practical implications of this progressive policy in the range of designs it has to offer – a policy recognised by the receipt of a *Design Centre Award* in 1960 (DESIGN 138/48).

Radio contraction

The *National Radio Show* this year presented a rather more encouraging picture of the industry in its attitude towards design than has been apparent for some time. While there was enough brash vulgarity to delight the cynics, improvements were sufficiently plentiful to be noticeable without microscopic search. Greater attention to detail, for example, has resulted in better lettering, neater controls and less blatant trade marks. The faces of cathode ray tubes have apparently grown larger (as the masks become more square), and with the increasing use of integrally moulded implosion shields, the sets seem to be more compact and better proportioned. There has been a tidying up of side and rear views and almost all backs of television sets are now formed from resin bonded fibre or glass fibre.

One tendency this year was to exploit every possible geometric variation on leg structures – crossed, sloping, tapered, parallel, three-legged versions, cross-braced or fitted with trays, racks, shelves, *et al.* The upsurge in transistor portables was evident among radios, though why the sharp, square cornered look should apply to something presumably intended to be carried in one's pocket must remain a mystery.

But perhaps the most dominant impression of the show was created by the large open spaces – indicative of the integration and contraction that has taken place in the

industry. The mergers into big groups are beginning to have their effect on the design of cabinets, and designers are now faced with the problem of creating an individual style for each of the firms within any one group, and at the same time of making the groups as a whole distinguishable from the others. This development will be discussed in greater detail in a survey of the industry to be published in a future issue.

Policy for hotels

Trust Houses Ltd, one of the biggest hotel groups in the country, has done much to raise standards of hotel service and to provide visitors with clean and comfortable surroundings. If its design policy for the many inns and old hotels has not been particularly adventurous, it has at least provided a safe and cosy atmosphere which is said to appeal to foreign tourists.

When it comes to furnishing new hotels, however, a different set of standards must apply. It is arguable that a casual mixture of styles and of good, bad and nondescript items can be acceptable in a coaching inn because it suggests an organic growth over the years, but it is hardly good enough in a modern building. The new Hertford Hotel at Bayswater is a clear demonstration of this. Furnishings and accessories show an unfortunate lack of a co-ordinated visual sense – which is a pity because the hotel has been thoughtfully planned and a great deal of attention has been given to the design of some individual pieces, particularly the fitted furniture.

It is good to hear however, that Trust Houses Ltd is now re-examining its design policy for hotel interiors and the outcome of this re-appraisal will be looked forward to with special interest.

Book for you

Industrial design is a very wide subject as readers of this magazine will appreciate. And it is the difficulty of covering all aspects of it within a limited number of pages which causes so many creases in the editorial brow. The gathering together of these diverse elements into a single volume is obviously needed – and this in fact is what has been done in *The Design Centre Book* published by the CoID last month. About 170 illustrations of leading British products, with features on design in the different rooms of the home and in the garden, tackle the subject on a wide front and make this volume a useful reference for those interested in getting value for the money they spend. It can be obtained from bookstalls or direct from The Design Centre and costs 3s.

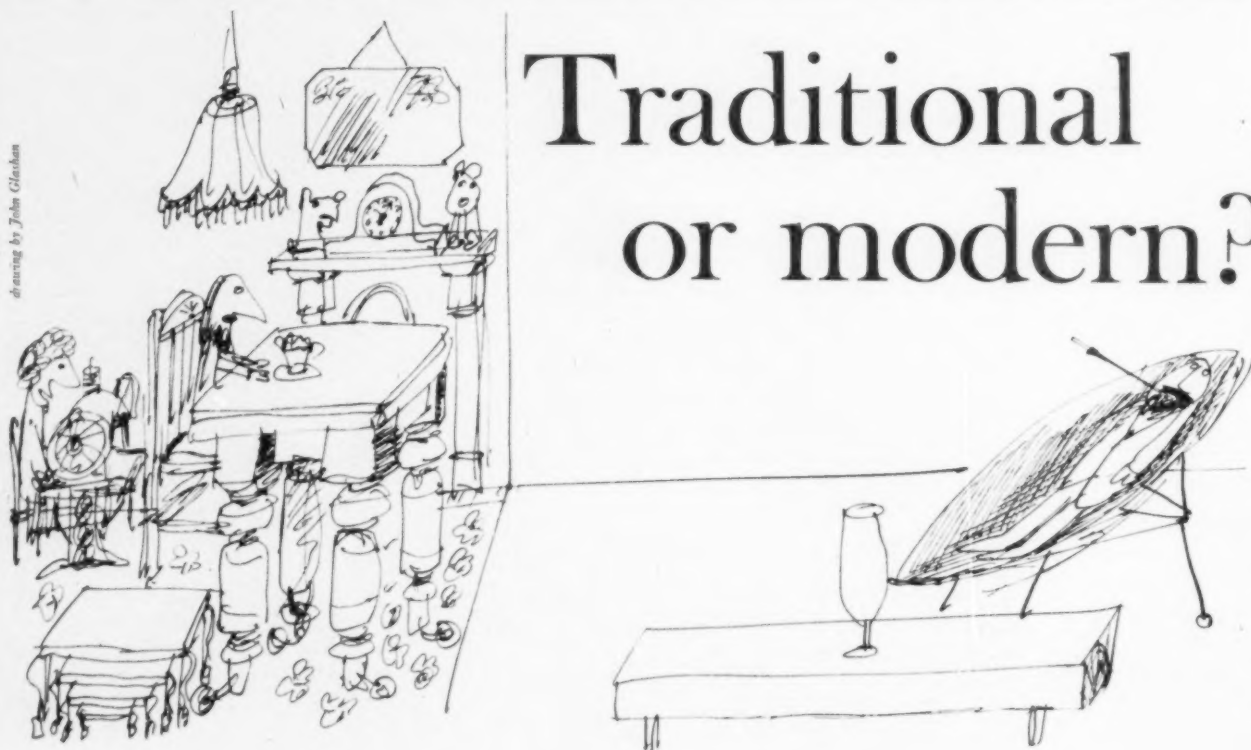
◀ Art editor's page

The criticism of portable transistor radios on this page (see *Radio Contraction*), in conjunction with the angry outbursts this summer from offended holiday makers, have prompted some basic re-thinking on the subject. The *TransistEar 1* (as yet still in the plasticine model stage) can be operated only when clamped firmly to the ear by sound proof suckers. For those who want to hear both programmes at once, a two-ear model is also being considered.

a critical period in Britain's
trade with world markets
reshapes an old argument:

Traditional or modern?

drawing by John Glendon



Many countries abroad still associate Britain with the production of traditional and reproduction designs. China, glass, silverware, furniture, carpets and textiles styled in the manner of the seventeenth, eighteenth and nineteenth centuries make up a proportion of our export trade and also have many devoted buyers at home. The CoID has consistently argued that if British industry is to secure its future place in world markets it cannot afford to rest on past achievements but must develop a living twentieth century tradition. Since it is the modern face of Britain which the CoID believes to be the least understood, the least publicised but, in the long run, a most important factor in this country's future prosperity, it has concentrated on showing modern goods in The Design Centre.

Industries which continue to receive large orders for traditional designs and perhaps have failed to make an impact with their modern goods, are not unnaturally sceptical of this. "If the Council accepts that an eighteenth century teapot is good, then why", they argue, "cannot it accept that a twentieth century version is also good. Since the CoID's stated objective is to promote the sale of well designed British goods, why should that teapot not be shown alongside other well designed products in The Design Centre?"

This is the problem we have asked the distinguished contributors to this symposium to discuss; and more specifically to provide their answers to our question: should The Design Centre show reproductions of good traditional designs?

imitation cannot be good

Professor Nikolaus Pevsner, head of the Department of the History of Art, Birkbeck College, University of London

The CoID is not an institute for export promotion. If it were, it ought to concentrate on bad design; for the proportion between those who appreciate good design and those who do not is like that between Third Programme listeners and habitual TV viewers. The terms of reference of the CoID are to promote good design, and this is not the place to argue about them. Imitation period design cannot be good, i.e. aesthetically valuable design, because it is devoid of the vitality of spontaneous creation. It has at best a borrowed vitality, at worst the attitude behind it is the faker's. It may be true that certain desirable markets demand from England imitation of the Georgian style. English Georgian was superb, and it is restrained enough to make it acceptable today. Moreover, it conveys notions of cultured, discreet wealth. Designs that appeal



Sam Lambert

to these markets may be necessary, but it is not the function of the CoID to promote them. However, that does not mean that the CoID is useless from the export point of view. Once it is accepted that the promotion of period design is as completely outside its function as is the promotion of bad design, then the comforting fact comes into the picture that in all countries there is a minority that cares for good design – in some few it is greater than here – and this minority carries far more weight than numbers would seem to justify. It is like the readers of *The Times* and *The Guardian* put together and set against the readers of the *Daily Express*. To convince them of good modern design in England is highly worth while. To convince them of a peculiarly English brand of good modern design is to convince them of England.

good, of whatever period

Sir Ernest Goodale, chairman, Industrial Art Committee, Federation of British Industries, and chairman, Warner & Sons Ltd



John Gower

As a founder member of the CoID I do, of course, subscribe to the basic aim of the Council – to foster a need for and the growth of good design in the whole range of British industrial production suitable for this day and age.

The Design Centre, established since my day, has become a considerable success. While the emphasis has been overwhelmingly on new and modern designs, it has not wholly excluded some traditional ones.

I do feel, however, that it would serve the cause of British industry better if the name had been boldly stated as The Modern Design Centre, because some of the overseas' buyers who are invited to visit the Centre may be disappointed at not seeing those things for which they have always come to Britain and may go away with the wrong impression that the CoID has persuaded the discontinuance of these productions.

We are repeatedly told that more and more exports are our only salvation, and that we must supply what the overseas customer wants. We must therefore encourage all buyers who come to Britain. Those buyers who do not want modern British designs – they may come from countries which perhaps do that sort of thing better – but who come to buy only the present-day examples of all that is best in the traditional designs of this country, are just as important to our economy as those who seek modern British goods. Some of the traditional goods may still be produced as formerly – individual pieces of hand-made furniture, hand block printed chintzes, fine glass and china in shapes and patterns of a past era.

Some fine quality carpets, silver, furniture, and other consumer goods may also be produced in modified traditional designs in excellent workmanship, and, in the case of textiles, in new and refreshing up to date colours. Surely if the Centre is The Design Centre it should give a fair proportion of its space to showing – particularly to overseas buyers – all that is available in well re-produced designs that have been and are considered good by their contemporaries of whatever period.

the CoID has gone astray

Lt-Col R. S. Williams-Thomas, *managing director, Stevens and Williams Ltd*

The CoID policy of concentrating on glass goods of modern design would be a perfectly sound idea if dealt with in a broad sense. Where the CoID has gone astray, in my opinion, is that it has not recognised the basic fact about English glass, namely, that it is fundamentally a crystal of reflective brilliancy, which can always be best achieved by means of the cutters' and engravers' wheels.

In working out a broader policy The Design Centre should recognise this and seek to encourage these designs which are not necessarily traditional; the CoID should always bear in mind that we, the British manufacturers, are equipped to produce our own style of modern designs, but are totally unable to compete in the Continental styles of glass design, which are suited to a type of glass lacking in lead content.

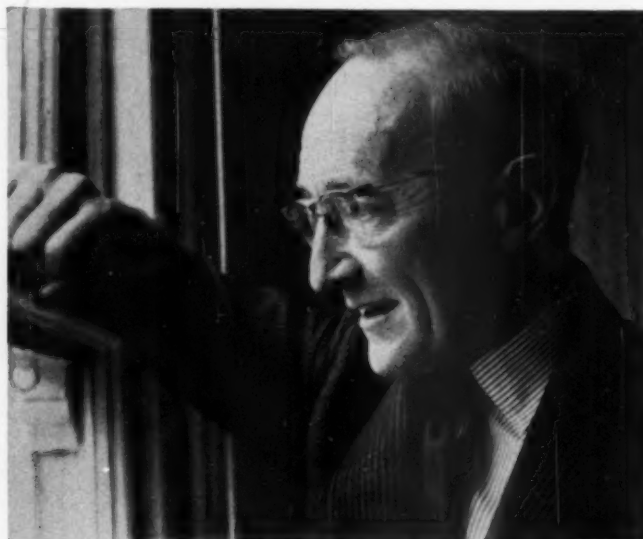


sunk by the weight of our past

D. M. Forrest, *chairman, Design and Industries Association, and commissioner, Ceylon Tea Centre, London*

I should be very sorry to see The Design Centre change its policy in the direction that is mooted in the introduction to this symposium. My main reasons are:

- (a) that however important exports may be at the present time, The Design Centre could not function as an export centre without completely altering its character and making the maintenance of selective design standards even more difficult than it is already.
- (b) If good contemporary design were already on top in Britain, as it is perhaps in one or two small Continental countries, there might be something to be said for bringing in the traditional note as well. But that is far from being the case. Outside the immediate environs of the Haymarket one gets the powerful impression that, if anything, the battle is a losing one, and that there is an overwhelming amount of propaganda work to be



done in the contemporary field before The Design Centre starts worrying about reproductions.

- (c) Industrialists always argue that to export successfully they need a solid home market as a base. The home market for good modern design, limited though it unfortunately is, will from now onwards be exposed to more and more competition from the Continent of Europe. This applies with far less force to our traditional goods.

These arguments really add up to one argument – that we in Britain are near being sunk by the weight of our past, and we need not one but hundreds of tradition-tight compartments like The Design Centre to keep us afloat.

All photographs in this feature are by John Garner except where otherwise credited

traditional as well as modern

J. K. Warrington, *managing director, Doulton Fine China Ltd*

A manufacturer is concerned with human needs, and his success is dependent on his skilful interpretation of these needs.

Given today's new architectural forms, and its stylistic internationalism, it would appear logical that all lesser products should speak in the same language as architecture. This logical view, however, may fail to recognise human needs and values.

This country has a rich, sophisticated and varied tradition which plays a large part in forming present day values, and at the same



Warrick Square Studio

time imparts a characteristic Englishness to those products which have evolved through tradition in a re-interpretative way. This Englishness is a valuable attribute in overseas markets, where its difference from the products of other countries is a prime factor. In our craft industries a sense of tradition is very strong, and particularly in the pottery industry, where design is concerned with the evolution of pure ornament, some of which will necessarily reflect a rich sense of history, just as the ornamentation of Robert Adam reflected the Renaissance.

To deny the merits of incorporating a sense of our past in our pottery products of today would be as negative as to deny the need for a progressive approach towards modern design. The human need for both exists: but whereas the latter is a slowly growing need, the former exists in enormous strength, and to ignore it is to present a lop-sided view of our industry.

It seems to me, therefore, that the criterion of judgment for inclusion of pottery products in The Design Centre should not be based on whether they are modern, reproduction or re-interpretative, but whether or not they are good of their kind.

time now to include traditional

Ivan Sanderson, *director, Arthur Sanderson & Sons Ltd, and chairman, Wall Paper Manufacturers Ltd*

Good design is ageless. The Doric column has yet to be improved upon. There are early Chinese bronze objects which for beauty and suitability to purpose have yet to be surpassed.

This is not to say that the CoID was wrong to begin by presenting the work of British designers of today. I think this was right. But so long as taste remains a personal matter, the country's trade, particularly its export trade, will not be fully promoted unless more traditional designs are now included. These are as much a part of Britain's contribution to civilised living as those which express the aspirations of the present day. The interest in them is great and continuing. There is no lack of evidence that people everywhere judge a wallpaper or fabric on its attractiveness and suitability almost without regard for the period by which it was inspired.

In our collections of wallpapers and fabrics we set out always to offer the best of modern design from all over the world. At the



same time, we continue to make available a wide variety of classic designs inspired by the styles of the past centuries, many of these being faithful reproductions. Some, indeed, are printed from the original hand blocks, although sometimes in colours with which we feel happier today.

It is not without significance, I would submit, that the Scandinavian countries, which certainly show no timidity in the matter of modern design, are among our biggest and most enthusiastic customers for such products. To this fact and its value to Britain I would now respectfully direct the attention of the CoID.

a thousand times no

Thomas Marchetti, vice-chairman, John Crossley & Son Ltd

Should The Design Centre show reproductions of good traditional designs? In our opinion, a thousand times no. We have been the first to criticize the CoID for being apparently willing to show traditional or semi-traditional design in fabrics and pottery while being unwilling to bend in the case of carpets. We have agreed to disagree. We have frequently thought the selection of carpets downright dull, and I have always disapproved of the way carpets were shown in the Centre. But forgetting carpets and thinking in general terms, we are quite sure it would be death to the CoID and its Design Centre if it were to deviate from its avowed policy to show consistently what is best, or what its broadly based committees consider best in modern industrial design in this country. From the vital export point of view we are continually dogged by the comment "Oh, but you still do that sort of thing so well", when speaking of traditional design. This is where the CoID



The Ambassador

comes in and must continue to come in. As far as I can see, it is the only organization – albeit partially financed by the Government – which can hope to break down the idea that there is no such thing as a lively twentieth-century tradition developing fast in this country and just waiting for the chance to develop further. Of course we are associated in Britain with the production of traditional and reproduction designs. We have acquired a reputation for them over a long period and we shall have to go on making them. But the CoID has rightly argued that we cannot afford to rest on past achievements if we are to secure and maintain a future place in world markets. The CoID may be defeated in its object; the iron hand of tradition may grip too tightly, or it may die through failure to propagate successfully. But better to die gloriously than as a result of the long and painful illness which could result from bowing to a section of the manufacturing fraternity whose order books may at this instant be comfortably full of traditional design.

spécialité de la maison

R. D. Best, chairman and managing director, Best & Lloyd Ltd

The CoID should certainly show reproductions of good traditional designs. It is a mistake, furthermore, to suppose that every new design suggesting the past is an 'old war horse'. Many excellent designs come on the market each year which are not unpromisingly 'contemporary'. There is certainly still room for creative ability and new ideas in a British traditional style.

Since 1951 the CoID has never faced the facts of design life, for at that time a contradiction must have been obvious to those visiting the South Bank Exhibition and Battersea Park. If the first was in a modern idiom, the second, with its suggestion of eighteenth-century architectural fantasy, most certainly was not. Offered for inclusion in the South Bank 'Design Review', the Battersea light-



ing pendant would surely have been rejected, if only because electric candles had been incorporated!

In the shops of Sweden, Paris, Switzerland and Brussels one may see the two approaches side by side. My company's policy has always been to follow both trends; our European customers, however, have always favoured a traditional style – a *spécialité de la maison* – when buying from this country.

this country lags behind

F. H. K. Henrion, *president, Society of Industrial Artists*

As traditional and period designs made in this country are well known, and their sales fairly established both at home and abroad, they do not seem in need of a special show place at The Design Centre. These products are what people expect from this country, and manufacturers know how to make and market them.

It is in the field of modern design that this country lags behind others, both in conception and production. An increasing demand



for these goods at home and overseas is not adequately met by British industry. The Design Centre, therefore, fulfills the much needed and difficult tasks of stimulating industry into making modern products of the highest standard and of promoting them by providing a show window in the Haymarket. It must be understood that these new lines, as they come forth, are not replacing existing traditional products, but complement them in order to ensure for Britain a deserved share of the ever increasing world market for modern goods.

and in conclusion

This symposium cannot present a comprehensive review of all interests and shades of opinion that surround a subject of such intimate concern to so many of our craft based industries. Nor is it intended as a sort of long range action committee, for no chairman could reconcile the divergent views that have been expressed. That the subject is still very much alive is, however, a reminder that those who believe the battle for modern design was won at the *Festival of Britain* are more optimistic than the facts allow. And while the sympathies of DESIGN are inevitably with the forward

one foreign view

Henry Dreyfuss, *American consultant designer*

There is no question in my mind but that products made today should be an expression of today, and contemporary in design.

This must not be construed as an aversion to traditional design – I admire and appreciate the antique as an expression of a particular era. However, I can see no reason for *reproducing* traditional designs. Certainly there are lessons to be learned from the past. For example, today's furniture designer should design a chair only after a thorough grounding in Chippendale and Hepplewhite – but having absorbed this knowledge, he must translate it into the idioms of this century, taking advantage of the new techniques and wonder materials of today.

On the other hand, I like *mixing* authentic designs of all eras. Providing they are the best of their kind, they will go well together and will produce an interesting result. Look at Oxford; certainly it has become one of the most beautiful universities in the world as each generation has added its best. The result is charm and interest and, through architecture, a lesson in history.

Realistically, so far as the CoID is concerned, it would seem to me that modern living and the marvels of modern production should dictate the contemporary designs to be offered for manufacture today.



Ronald Perridge

looking elements in the controversy, it would be short sighted to ignore the strength of the opposing views.

It is perhaps a measure of Britain's vitality that design policies, of whatever colour, are pursued with such determination, and can be argued so hotly but without rancour. And it was just this enthusiasm for argument about design that drew the admiration of a German designer and teacher who called in to the office recently. "When you in Britain cease to think and argue about design", he said, "that is when you should start getting worried."

BRITAIN IN EUROPE

In the past, furniture has not been considered to be an exportable commodity because it is costly in freight, it dislikes marked changes in climate, and regional preferences in style have been an obstacle to a wide distribution. These objections are now being questioned by the more progressive manufacturers who are designing furniture to stack or pack flat and so reducing the bulk for freight, using more stable materials than the traditional solid timber and simplifying the style of their designs in a manner which makes them more widely acceptable. These developments make exporting furniture to Europe a more encouraging proposition, although it still bristles with problems, of which price is by no means the least.

In terms of opportunity the Common Market is probably the most attractive area to develop because it is the largest, nearest and richest of the European markets. British manufacturers are, however, faced with the problem of deciding at which level of trade it would be most profitable to compete. Broadly, the medium to lower priced merchandise in these countries is stocked by department stores and these offer potentially wide sales, although orders may be curtailed without much warning. Higher priced quality goods, on the other hand, tend to be sold in the small specialised shops which may place smaller orders but maintain a steady demand over the years. As they frequently ask for an exclusive distribution in their own city it is usually necessary to choose one outlet or the other. As a rule, our prices in the middle ranges are not very competitive, so the higher quality ranges may offer better prospects for the immediate future as the price can be justified in terms of design and quality. These specialist shops in Europe will therefore be important to many exporters of British furniture and may offer the best opportunity of trying out designs in a limited way in selected areas.

One recent development of interest to British manufacturers of furniture, furnishings and tableware is Salas, the small and highly selective showroom for British goods, right, which John Ashlyn has recently opened in Geneva.

This new showroom is remarkable in two ways. The interior display has been most successfully designed by Robin Day, and all the goods have been chosen from The Design Centre in London, including a number of products which have received *Design Centre Awards*. The domestic and office furniture is mainly by S. Hille & Co Ltd, but there is a representative collection of high quality modern British goods ranging from pans, pottery, textiles, glass and metalware, to the transistor radio whose designer won the Duke of Edinburgh's *Prize for Elegant Design* this year. The display equipment consists of simple ladder units and glass shelves, with textiles and timber to subdivide the space.

This showroom is a pioneering effort which supports Britain's claim that she can now offer quality goods of imaginative modern design, equivalent in merit to her best traditional designs, which are famous throughout the world. It deserves the support of British manufacturers who have a reputation for modern design and wish to export, but are not represented in this area.

London has recently seen the arrival of so many showrooms of foreign goods which are well designed, that it is refreshing to find that their British counterparts are beginning to appear in a small way on the home ground of our competitors.

J. NOEL WHITE

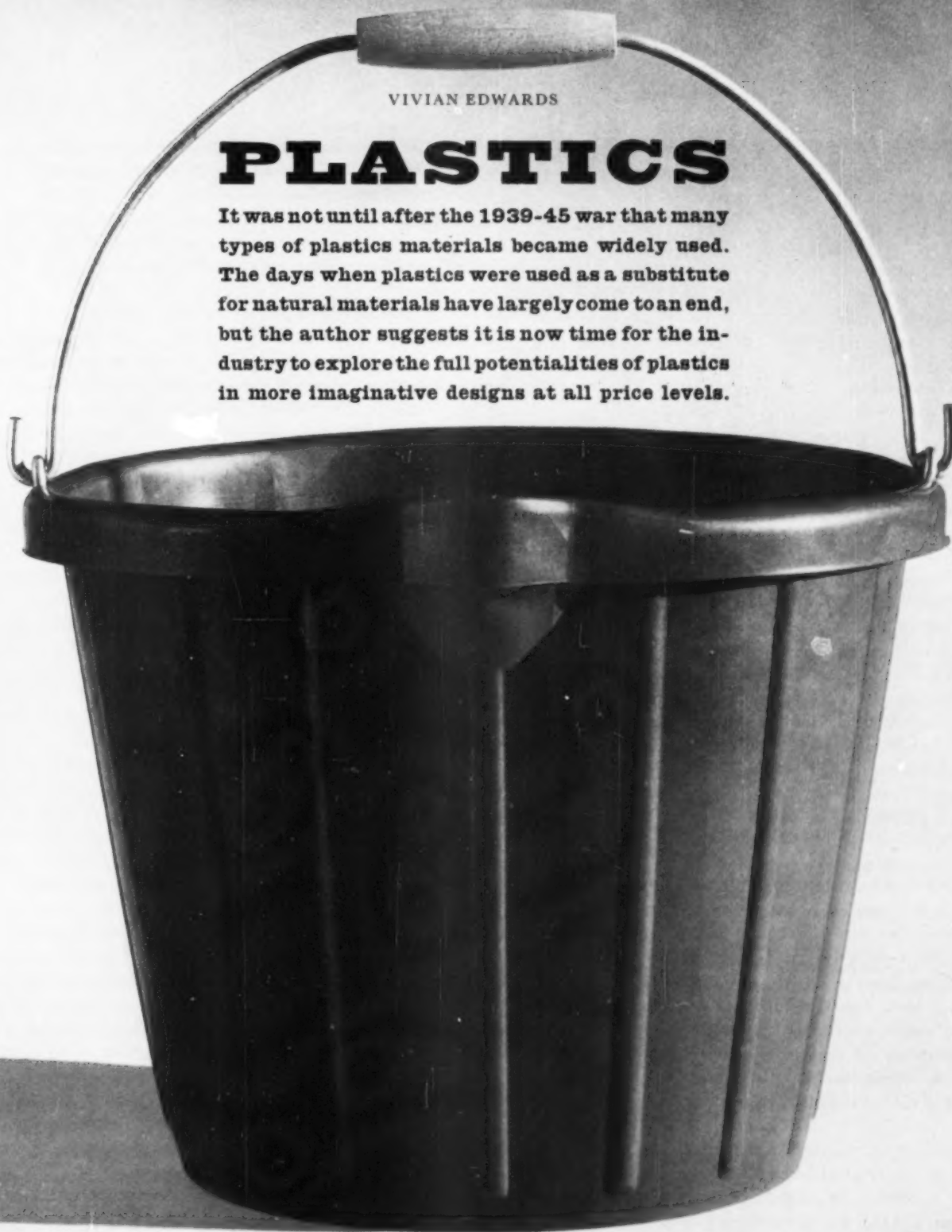


Part of Salas, John Ashlyn's new showroom in Geneva, with its display of British goods chosen from The Design Centre.

VIVIAN EDWARDS

PLASTICS

It was not until after the 1939-45 war that many types of plastics materials became widely used. The days when plastics were used as a substitute for natural materials have largely come to an end, but the author suggests it is now time for the industry to explore the full potentialities of plastics in more imaginative designs at all price levels.



In the immediate post-war period plastics was regarded as an all embracing wonder material that could shortly transform our lives. The 'Age of Plastics' was presented as a futuristic image which caught the public imagination. But we were to be disappointed. As mass production of plastics articles was relatively easy, the market was flooded with plastics products for the home; however, the few materials then available were hardly suited to the uses to which they were put, with the result that many designs were poor in appearance and functionally inefficient.

It is to the credit of the industry that the early failures did not prove to be disastrous, and today it is making fantastic progress with new materials and methods of manufacture. However, many different materials encompassed by the general term 'plastics' still present a common image, creating problems not only of identification but also of application. The profusion of trade names for raw materials further aggravates the position. Raw material manufacturers and users of plastics can do much to overcome this by the adoption of more specific terminology – even at the expense of brand names. For plastics constitute a group of materials each differing in degree rather than in kind. It is the precise combination of properties shown by any one plastics that determines its technical and commercial utility.

Without the progress made in plastics materials, developments in certain sections of British industry, such as radio, telecommunications and electronics would have been retarded. But some of the criticisms regarding the design of articles manufactured from plastics still apply. The reasons are understandable when seen against the broad historical development which falls into two main sections: substitution – simulation; and establishment – creation.

Development of plastics

The impetus for the development of plastics originated from the need for a cheaper substitute for natural substances. Cellulose nitrate was first made in 1868 in an attempt to produce a substitute for ivory; other early plastics materials, such as lactic casein, were made as the result of efforts to imitate coral, tortoiseshell and horn. Inevitably, the new designs closely followed the existing shapes, since imitation was the sole aim. If, at the time, manufacturers did consider the possibilities of using plastics as materials in their own right, then such ideas must have been suppressed in the belief that they would be unacceptable to the consumer.

As many more varieties of raw materials became available, providing diverse properties and possible applications, there was no longer an excuse for regarding cost-substitution as the main criterion. The idea that the intrinsic qualities of plastics should be recognised and expressed in the way in which those materials were

handled was promoted by designers and others about the time of the *Festival of Britain*; and today this attitude is generally accepted by the industry. Look in any hardware store and you will be faced with domestic plastics products of all sorts which, if not remarkable for imagination or refinement in design, at least show an honest interpretation of the physical properties of the material.

In other directions plastics are being used for component parts of more complex products – plastics gears to minimise noise, PTFE surfaces to reduce frictional losses, polystyrene linings for refrigerators, casings for radio sets, and so on.

Limitations

It is in these cases that the choice of material is made less with the idea of finding a substitute for traditional materials than with the need to select the best material for the job. The table on pages 52-55 has been included to provide a reference to the basic characteristics of the families of plastics, together with general applications. In addition, sketches and brief descriptions of the common plastics handling techniques are appended.

The design of a moulded article in many of the inexpensive semi-rigid thermoplastics usually involves the use of a minimum of material which must be adequately distributed to ensure strength at all points. Less raw material is required in a rounded form to achieve a given degree of strength than is required in an angular form. The all too typical plastics shape is therefore of generous radii at corners and edges, and avoids, where possible, vertical flat surfaces. This allows the plastics to flow easily into the mould and facilitates extraction; it also reduces tooling costs and minimises tool wear. Such limitations are, however, basically economic, rather than technical.

A great outlet for raw plastics is in making components rather than complete products, and thus has evolved a large 'jobbing' industry. It seems likely that this structure has a marked effect on design standards and may well be retarding progress in design. For when a company sets out to market a new product in plastics, rather than install production machinery at high initial cost, it may be tempted to utilise the services of a jobbing firm already available. Although most trade moulders offer technical services, few have such comprehensive design policies as British Industrial Plastics or Ecko with their well staffed design teams; and unless the designer is singularly forceful, detailed alterations to design can occur when manufacturing by remote control, so leading to a botched result.

Greater control is possible when firms, such as Brookes and Adams, do their own moulding. For example, it is significant that some of the more imaginative tableware designs in melamine by

Brookes and Adams have come from a careful study of the opportunities offered by the moulding process. And it is by this type of study that the greatest progress in design is likely to be made. Even though the period of substitution and imitation is now largely over, plastics tableware in this country, is still considered to be primarily for everyday service and is kept firmly out of the way on important occasions.

Designs of quality

On the Continent, melamine, acrylics and some other plastics have been treated by designers as materials of high quality that can take their place on the dining table alongside glass, china and stainless steel. The machined finish on a range of melamine bowls, 19, from Denmark, or the combination of plastics and silver in a set of salad servers, 22, are two Continental examples of this truly creative approach to using plastics. The demand abroad for British goods of high quality, which is discussed in the leading article of this issue, page 39, suggests that we could do more to investigate further applications of plastics materials, not only in this high quality consumer field but in the larger industrial markets as well.

Of the more utilitarian domestic products which are to be seen cramming the shelves of any ordinary hardware store, the severe competition in price restricts the development of more refined or inventive designs. Most of the buckets and bowls are not so very different from their galvanised iron predecessors. Clearly, the traditional forms of our domestic environment die hard and it is rare to find designs as revolutionary in conception as the Ekco watering can of 1956 or the Racasan closet. These, however, are the pointers to a more creative use of plastics in the design of the many mundane types of product for everyday domestic use.

That such revolutionary designs may at first be resisted by the consumer is more a measure of their rarity than of their intrinsic worth, for they are the odd men out, the freaks that are regarded with suspicion. In a climate of creative design they are more readily acceptable – certainly as far as the home market is concerned. And it is upon a flourishing home market that our exporting prospects must be based. Most industrial countries now have a highly developed plastics producing industry, and any success we have in exporting to these countries will depend to a large extent on the superiority of our designs.

It is for this reason that we have included, in this survey, a number of designs from abroad which show that there is no great cause for complacency. Many of the products have been chosen from the selective international display at this year's *Interplas* exhibition held recently at Olympia – in itself an indication of the British industry's awareness of the growing importance of good design in world markets.



In the manufacture of plastics, the end product, however simple in shape, is only achieved by means of a number of complex chemical actions involving the use of huge automated plant of which this is a typical example. The illustration is from a photograph of the Shell Chemical Co Ltd's styrene monomer plant at Carrington, Lancashire, where the basic chemicals for the manufacture of polystyrene are produced.

Although the proportion of family groups of plastics materials theoretically available is very great, in practice the plastics industry utilises a relatively small number. The following table attempts to compare the more important of these. Limitations of space have, for example, prevented the inclusion of reinforced plastics generally and the polyester resins in particular. The properties of each specific plastics depend on many factors, and the type of filler or proportion of

Plastics group	Common type	Characteristics and important qualities
THERMOSETTING PLASTICS		
Phenolics (PF plastics)	Phenol-formaldehyde, moulding material available in three grades	Good strength, hardness and rigidity, depending on filler. High resistance to moisture. Good resistance to solvents and common chemicals
Ureas (UF plastics)	Urea-formaldehyde	Odourless, tasteless. Good resistance to alcohol, oils and greases. Good balance of strength, hardness and rigidity. Good rigid heat insulator. Good insulation resistance, depending on fillers. Available in colours ranging from pale translucent to white and black. Translucency is dependent upon the filler employed
Melamines (MF plastics)	Melamine-formaldehyde	Similar to ureas but with superior chemical and heat resistance and durability under exterior exposure. Good water resistance. Very hard.
Silicones	Resins can be either thermosetting or thermoplastic	Excellent resistance to heat, oxidization and weathering. Water repellent. High insulation resistance. Great strength
THERMOPLASTICS		
Acrylics	Polymethyl methacrylate	Optical clarity. Unlimited colour range. Easily formed and machined. Unique optical properties enable light to be transmitted from edge to edge even around curves. Outstanding weather and ageing resistance. Shatter proof. Low water absorption. Non toxic, odourless and tasteless
Polystyrene	Available in general purpose and high impact forms	Does not absorb water. Good electrical insulator. Full range of transparent and opaque colours. Good dimensional stability. Free from taste and odour. Excellent moulding qualities
Polyethylene (polythene)	Available in a range of densities	Virtually unbreakable. High impact strength. Non toxic. Outstanding electrical properties. Good chemical resistance. Excellent moisture resistance
Polypropylene		Particularly suitable for applications requiring greater rigidity and higher temperature resistance than are available from polythene. Excellent mechanical strength at elevated temperatures. Very hard scuff-proof surface. Good dielectric properties and insulation resistance. Good dimensional stability. Lightest of all commercial plastics. Very high melting point. Good chemical resistance
Polyamides	Nylon, which is available in four common types: 610, 66, 11, 6	Tough over a wide range of temperatures. High strength in thin sections. Excellent abrasion resistance. Good frictional properties. Can be steam sterilized. Good resistance to organic chemicals
Vinyls	Polyvinyl chloride (PVC). May be flexible, semi-rigid, or rigid, depending upon the proportion of plasticisers used	Hardwearing. Good electrical properties. Self extinguishing. Resists penetration of water. Full range of transparent translucent and opaque colours. Resistant to outdoor exposure. <i>Plasticised</i> PVC (50-100 per cent of plasticiser) has better impact strength than unplasticised PVC. <i>Unplasticised</i> PVC has better corrosion resistance than plasticised PVC. More difficult to mould than polythene or polystyrene

plasticiser incorporated in the basic material also varies the characteristics. Thus, of necessity, the table is restricted to description in general terms. For more particular information, the advisory services provided by the raw material manufacturers should be utilised.

Much of the importance of plastics lies in the fact that their behaviour under thermal stress makes possible mass production to close tolerances at relatively

low cost. It is this behaviour that brings about a broad division of plastics into 'thermoplastics' and 'thermosetting' materials: thermoplastics, when heated to a moderate temperature, produce a soft mass which flows easily under pressure and which hardens again on cooling; in contrast thermosetting materials first soften when heated and flow under pressure, but then undergo a chemical reaction which leads to the formation of a rigid, infusible material.

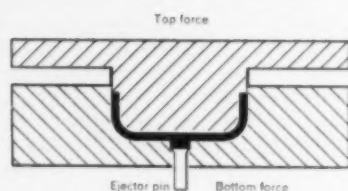
Limitations	Forms of material	Processing techniques	Applications
Basic resin of moulding compounds tends to colour under influence of light. Therefore only suitable for use in limited range of dark colours. Prone to tracking, and therefore, unlike UF and MF plastics, PF plastics have limited electrical applications depending on filler	Preforms and sheets for post forming. Resins to which fillers of woodflour, paper, asbestos, mica and others are added	Compression moulding; cast moulding; lamination	Door furniture, handles, low voltage electrical fittings, ventilator fans, developing trays, buttons, costume jewellery, weather resistant plywood
Some fillers readily absorb moisture. Not suitable for applications involving continuous weathering or exposure to extreme changes in humidity. Cracking can develop when used for applications where moisture is absorbed and then dried out	Powders; foams; resins to which fillers are added	Compression moulding; lamination	Picnic ware, light reflectors, domestic containers, bottle caps (widely used for electrical fittings, mainly due to the fact that they are cheap. But not ideally suited to these applications)
More expensive than PF or UF plastics	Powders; solutions	Compression moulding; coating; lamination	Tableware, kitchen utensils, laminates, electrical insulators
	Moulding compounds; resins; coatings; greases; fluids	Compression moulding; transfer moulding; lamination; expansion	Aircraft braking assemblies, moulded parts for jet engines, aircraft ignition systems, silicone glass cloth, laminates, foamed silicone resins, h f equipment
Crazed by organic cleaning agents. Low fire resistance. More easily scratched than glass	Rigid sheets; blocks; rods; tubes; powder	Injection moulding; compression moulding; thermo forming; extrusion; machining; cementing	Display work (eg, signs, facias), lighting fittings, sanitary fittings, optical lenses, telephones, instrument panels, surgical instruments, fountain pens, TV implosion guards, car components
Tendency to craze. Poor ageing qualities. The general purpose material has a low impact resistance. The modified form is better in this respect	Powders; sheets; rods; foamed blocks; films	Injection moulding; extrusion; vacuum forming	Packaging, wall tiles, light fittings, toys, refrigerator liners, photographic equipment, kitchen utensils, radio and TV cabinets, and components
Certain grades subject to environmental stress cracking dependent upon density. Low rigidity and abrasion resistance	Powder; sheets; film; filaments; rods; tubes	Injection moulding; blow moulding; extrusion	Houseware, toys, cables and electrical components, rigid containers, squeeze bottles, piping, packaging
Brittle at low temperatures	Powders; sheets	Injection moulding; blow moulding; extrusion; vacuum forming; machining	Agitators for washing machines, domestic hollow-ware, radio, TV and electrical components, sanitary ware, toys and sports equipment, commercial containers, piping
High water absorption rate. Electrical properties deteriorate as humidity and temperature rise. Only moderately resistant to acids. Not suitable for prolonged exposure to sunlight	Powder; sheets; rods; tubes; filaments	Injection moulding; blow moulding; extrusion; coating; machining	Gears, mechanical components, surgical and chemical accessories, combs, brushes
Low surface temperature. Unplasticised PVC can be moulded only in a pre-plasticising machine	Powders; pastes; sheets; foams	Injection moulding; compression moulding; slush moulding; extrusion; vacuum forming; calendaring; spreading; coating	Curtains, upholstery, flooring, wall covering and cladding, gramophone records, packaging, protective clothing, toys, signs and displays, car hoods, piping, lighting fittings

continued

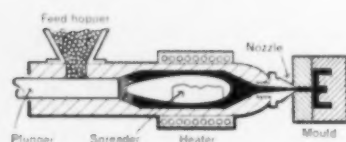
Plastics group	Common type	Characteristics and important qualities
(THERMOPLASTICS continued)		
Fluorocarbons	Polytetrafluoroethylene (PTFE)	Extremely inert. Nil moisture absorption. High compressive strength. Excellent electrical dielectric properties and insulation resistance. Good heat resistance. Exceptionally low coefficient of friction. Non-toxic. Immune to chemical attack. Excellent weathering and ageing characteristics
Cellulose acetate		Relatively non-inflammable. High impact strength. Exceptional toughness. Low heat conductivity. High dielectric strength
Cellulose acetate butyrate	The ratio of acetic to butyric components may be varied to produce a flexibility ranging from hard to soft	Similar to cellulose acetate but with superior dimensional stability. Lighter in weight, lower water absorption rate, easier moulding properties. Good weathering and ageing characteristics
Cellulose propionate		A further development that is free from objectionable odour, and moulds readily into intricate sections and parts; characterized by freedom from welds and flow marks. Lustrous finish. Resistant to hydro-carbons and mineral oils

Manufacturing processes

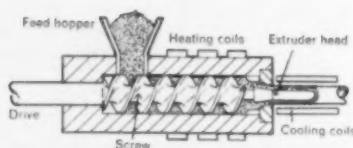
The diagrams indicate some of the commonly used manufacturing processes. Some processes such as calendering and lamination have specific applications, and the designer's choice is limited to variations within those particular techniques. With moulding, however, the designer has more scope, but must be



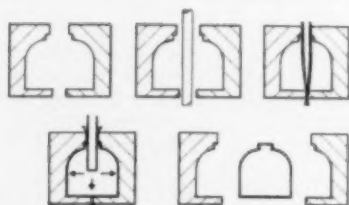
1 Compression moulding consists of shaping a powder in a hot mould by pressure. If the powder is of a thermosetting plastics, the moulded article is then kept at a suitable temperature for a fixed period of time whilst curing takes place. When compression moulding is used for thermoplastics materials the moulds have to be cooled after each pressing operation before the moulding can be extracted. Comparatively long pressing cycles may result and compression moulding is therefore restricted to rigid applications, or to applications where the faster techniques cannot be applied, eg, shaped articles to accurate dimensions.



2 Injection moulding is one of the major methods used to fabricate a wide range of thermoplastics materials on a mass production basis. The process consists in softening the material in a heated cylinder and injecting it under great pressure into a closed mould, from which the moulded article can be ejected. The size of articles moulded by this method has tended to be restricted to small items capable of fast moulding cycles. Larger items such as refrigerator liners, however, are now being produced by this method.



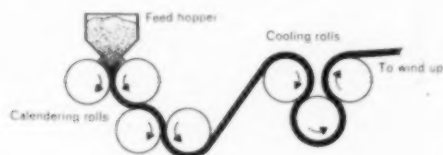
3 Extrusion Shapes are formed by forcing heat-softened powder through a shaped opening forming a continuous section, on rather the same principle as the domestic mincing machine.



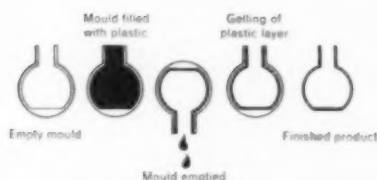
4 Blow moulding Hollow containers are produced by extruding a length of tube into a heated mould and distending it by means of air or liquid pressure to conform with the shape of the inside of the mould. When the mould cools sufficiently, the split die is opened and the moulded article ejected. This method is widely used for production of bottles and containers, but suffers from the disadvantage of the inability to control wall thicknesses compared with neck thicknesses. Containers produced by this method are identifiable by traces of a single flash line down the sides of the container and across the base.

Limitations	Forms of material	Processing techniques	Applications
Slow to fabricate as it cannot be processed by conventional techniques. Sintering techniques are employed. The size and complexity of components is thereby restricted. Poor abrasive resistance. Poor creep qualities	Powder; dispersions	Preforming and sintering; spraying; impregnation; coating	Gaskets, electronic components, diaphragms, valve seats, insulation, mouldings for guided missiles, atomic and general engineering applications, non-stick surfaces
Subject to dimensional change due to cold flow heat or moisture absorption. Not suitable for prolonged exposure to weather. Only suitable for moulds of relatively low loads in which dimensional ageing can be tolerated. Low heat resistance	Powders; sheets; films	Injection moulding; compression moulding; heat forming	Handles, radio knobs, mixing bowls, toys, wallet envelopes, combs, displays
Poor resistance to alcohols, acetone, solvents and mild acids. In some circumstances the odour of butyric derivatives is perceptible. Low heat resistance	Powders; sheets	Injection moulding; compression moulding; heat forming	Gunstocks, fishermen's floats and tackle, wallboard moulding, tool handles, automobile components, domestic appliance components
Some variation in moisture absorption rate depending upon humidity. Low heat resistance	Powders	Injection moulding; compression moulding; heat forming	Telephones, appliance housings, knobs, pens and pencils, crash helmets, radio cabinets

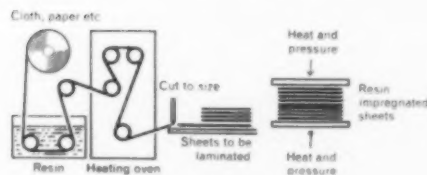
guided by economic considerations. The tooling costs of compression and injection moulding are high. This expense must therefore be justified by the quantities to be produced. Should such justification not exist then some other method of moulding with lower tooling costs must be employed.



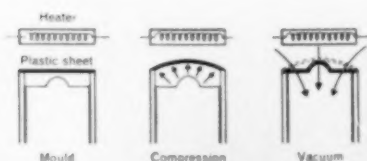
5 Calendaring is mainly used for PVC. A continuous sheet is made by hot rolling the plastics on special calender rolls, which are adjustable to produce the required thickness.



6 Casting or slush moulding In this method a mould, which may be either a complete shell or a die capable of being split into two parts, is heated, filled with plastics in paste form, and left for a short time depending on the wall thickness required. The excess paste is drained off and the mould heated until the plastics has set, thereby assuming a predetermined shape without the use of pressure. This method is readily adaptable for the lining of hollow articles. As the mould does not have to withstand great pressures, it can be very cheaply made from other materials such as plaster of Paris. The disadvantage of this method is that the thickness of the walls cannot be accurately controlled.



7 Lamination A process whereby resin impregnated material is stacked to the required thickness and placed between polished steel plates in an hydraulic press. The action of heat and pressure causes the resin to flow and then harden, combining the separate sheets into solid structures.



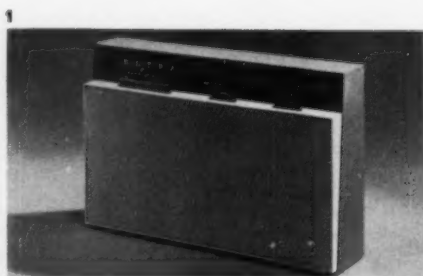
8 Thermo forming Sheets of heat-softened thermoplastics material can be shaped over formers, pressed with male tools, or shaped by applying different air pressures on opposite faces, and then allowed to cool while held in the desired shape. The most important version of this technique is vacuum forming. This process consists of drawing the heat-softened thermoplastics sheet into a mould by means of a vacuum developed through openings in the mould. As only one half of a mould is required, and as the mould may be constructed from a variety of materials other than steel (depending upon the usage required), tooling costs are low.

1 The *Rio* portable transistor radio with a high impact polystyrene cabinet and an expanded aluminium grille, whose designer received the Duke of Edinburgh's *Prize for Elegant Design*, illustrates how effectively plastics may be used in combination with more traditional materials. DESIGNER *Eric Marshall*. MAKER *Ultra Radio and Television Ltd.* £10 7s 6d.

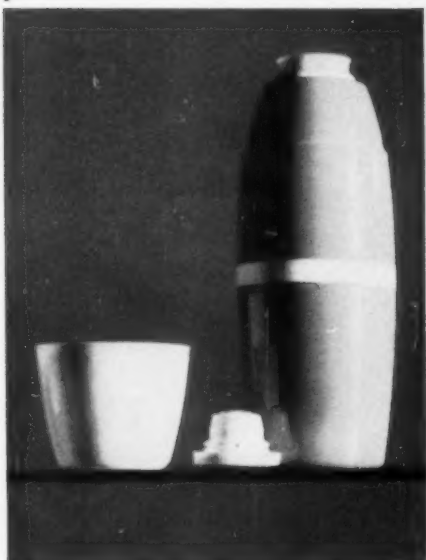
2 The *Paragon* chemical closet which won a *Design Centre Award* in June, employs a mixture of plastics. The container is moulded in high density polythene, the seat and lid are in medium density polythene, hinges are nylon and the hand grip on the handle is a PVC extrusion. The closet was moulded by Ekco Plastics Ltd. DESIGNER *Martyn Rowlands*. MAKER *Racasan Ltd.* £4 17s 6d.

3 Miniature circuit breaker, model 256, type 50C, the case of which is formed from alpha cellulose filled urea-formaldehyde. One of the greatest uses for plastics is possibly in electrical applications and cable manufacture, but it is rare for the electrical industry to take such trouble with its products. DESIGNER *John Vale*. MAKER *J. A. Crabtree & Co Ltd.* Price from maker.

4 An example of the functional approach to the use of plastics is indicated by this industrial bucket. Produced in polythene, this bucket has a ribbed wall and reinforced top and bottom. It is primarily intended to replace the galvanised buckets which are widely used on building sites. This bucket has been designed to combine a large capacity/light weight ratio and toughness with a resilience which enables dried cement to be easily removed. MAKER *Dohm Ltd.* Price from maker.



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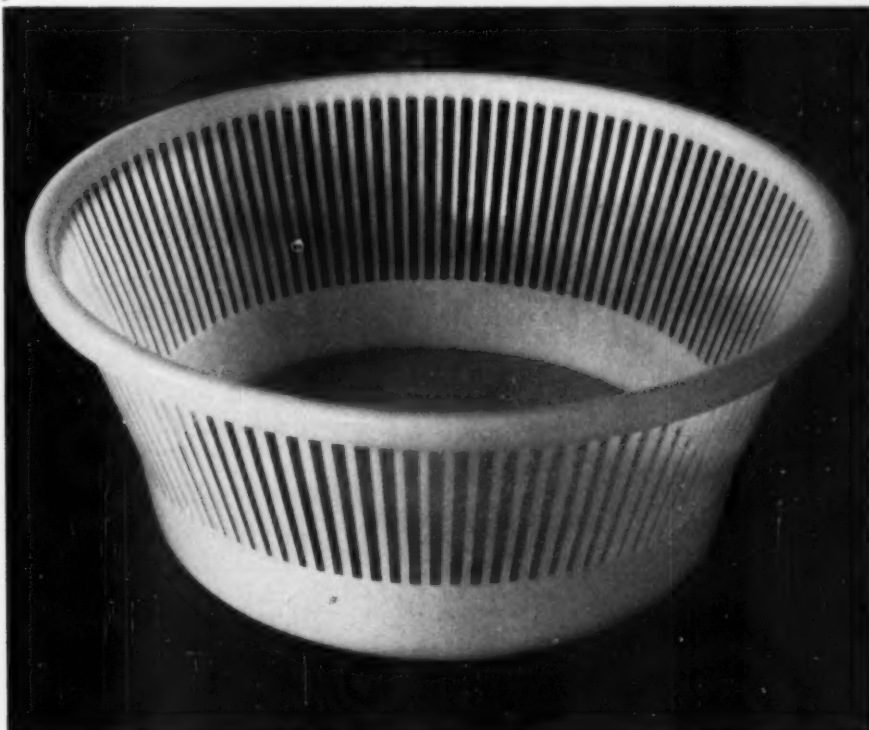
5 *Vacco de Luxe* vacuum flask in high impact polystyrene. The cap is snap-on; the stopper is said to be leak-proof, the pourer non-drip, and the mounting shock absorbent. It can be dropped on to a hard surface without damage. The manufacturer designs and produces its own moulds and moulding rather than relying upon trade moulders. DESIGNER *L. Leslie-Smith*. MAKER *Vacco Ltd.* 8s 11d.

6 One of Ekco's own designs is this layette basket. It is formed from high density polythene. DESIGNER *David Powell*. MAKER *Ekco Plastics Ltd.* 11s 7d.

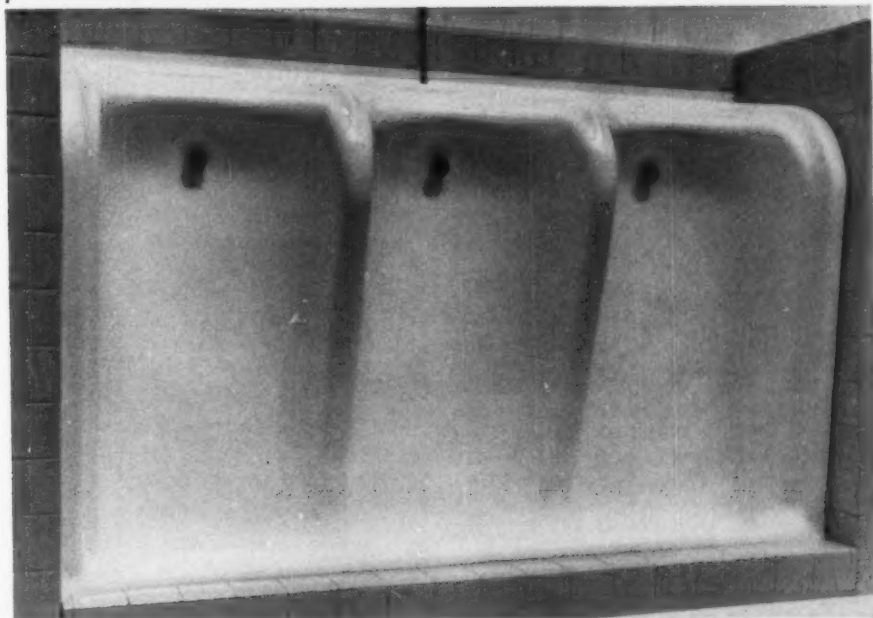
7 Urinal stalls: an increasing use for Perspex is in the design of sanitary ware, particularly for hospitals. MAKER *Thermo Plastics Ltd.*

8 The body of this polish applicator is in medium impact polystyrene, a material which here combines rigidity and lightness. A nylon fabric covers the foamed plastics applicator pad. DESIGNER *Peter Ray*. MAKER *J. Goddard & Sons Ltd.* £1 5s.

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9 Case and handset of the *Etelphone* are moulded in polymethyl methacrylate, and are available in seven colours. The standard chord of PVC matches the colour of the handset. An amplifier is built into the handset ear piece. A drawback of plastics is the tendency to build up an electrostatic charge that attracts dust which can make the numerals unreadable, unless they can be readily cleaned. Here the numerals are outside the dialling ring.

MAKER *Ericsson Telephones Ltd.*

10 Kitchen tidy (model 187) is moulded in polythene. Handle consists of chromium plated steel with a polythene grip. Bucket capacity 2½ gallons.

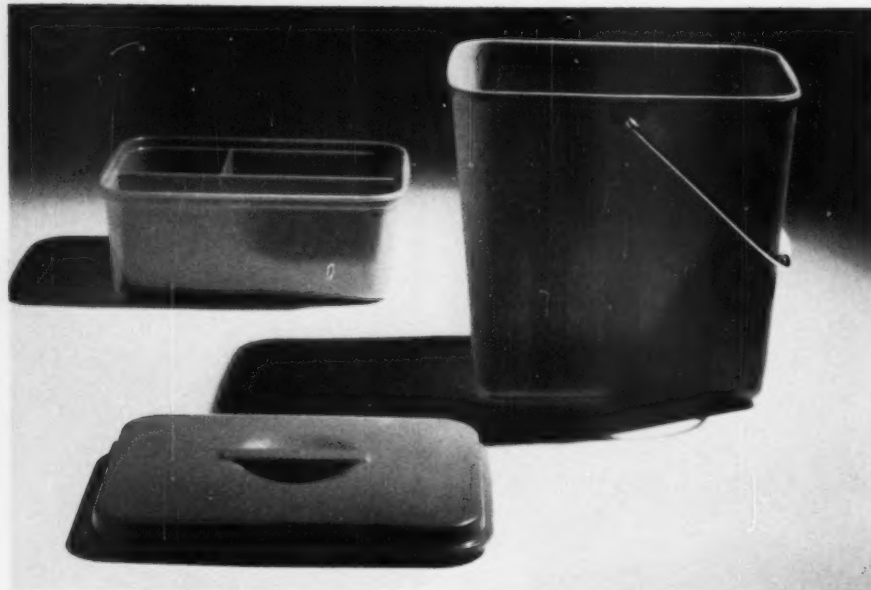
MAKER *Stewart Plastics Ltd.* £1 9s.

11 Egg cups from the Midwinter Modern range.

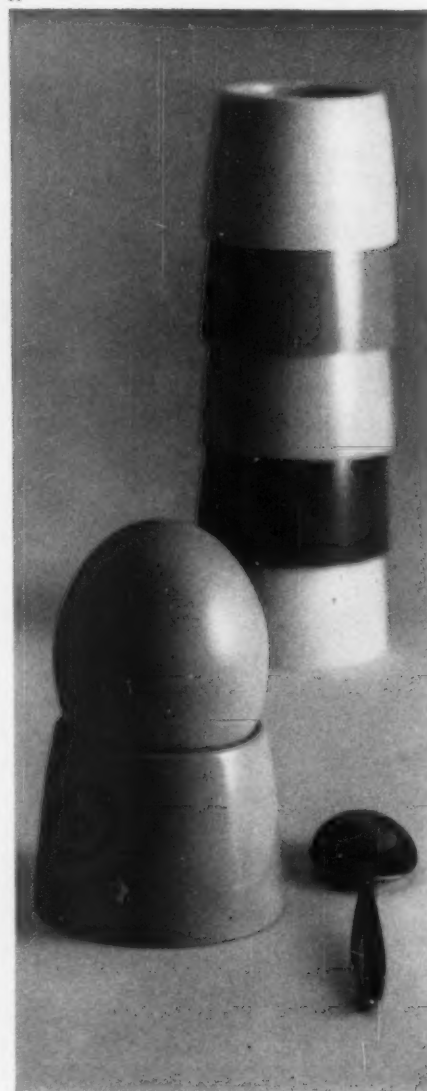
These high quality products are moulded in melamine. MAKER *W. R. Midwinter Ltd.* 1s 9d.

12 This firm maintains a high standard of design in many of its products. Here, the slide viewer, *Major View 35*, is moulded in polystyrene. The lens cap performs the dual purpose of protecting the surface of the lens and also converting the viewer into a correctly angled table model. DESIGNER *D. M. Paterson in conjunction with D. S. Associates Ltd.* MAKER *Paterson (Products) Ltd.* £2 19s 6d.

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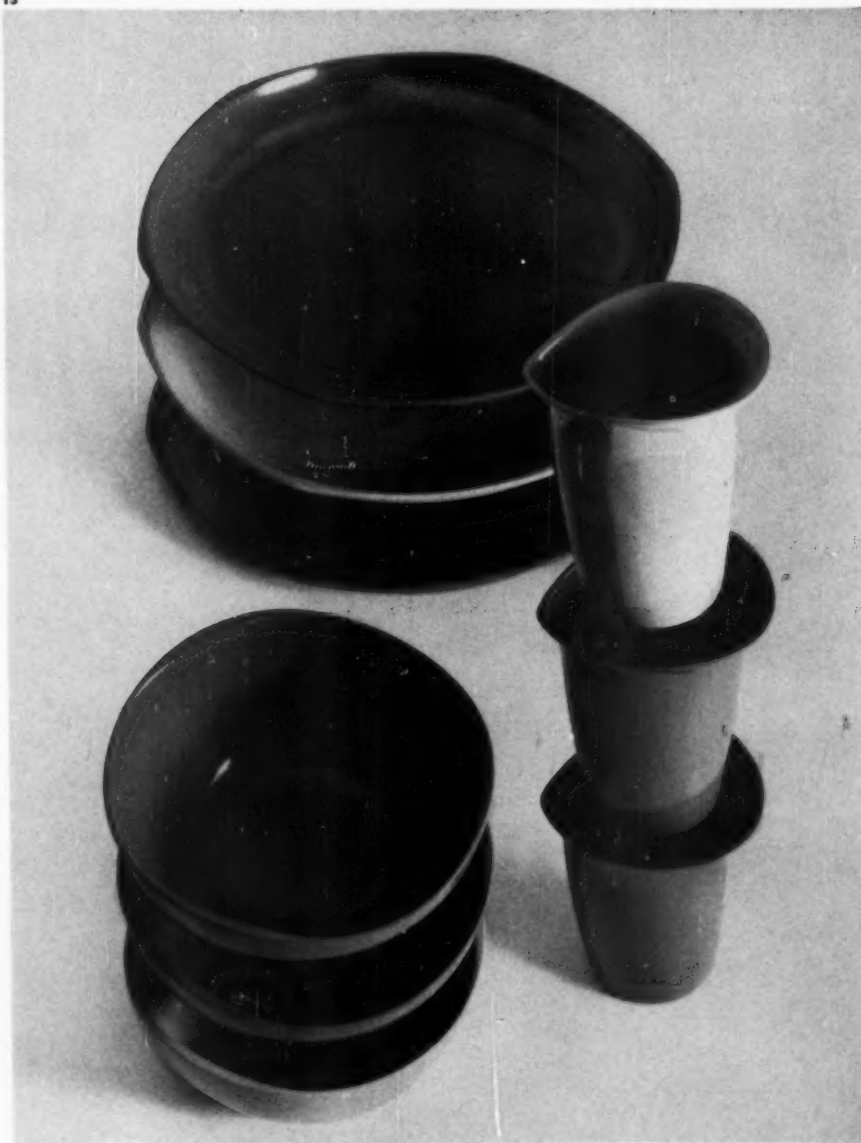


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13, 14 and 15 Melamine tableware is rapidly gaining popularity in this country. The great advantage it offers over tableware in traditional materials is that it will withstand rough treatment. It is break and chip resistant, odourless and will tolerate temperatures well in excess of boiling water. The cost is roughly equal to that of white bone china, and about twice that of white earthenware. The main disadvantage it possesses is its proneness to staining. The majority of producers of melamine tableware are outside the pottery industry. This may well account for the relatively rapid transition from the traditional pottery shapes to the imaginative design approach illustrated here.

13 Part of the *Fiesta* range of tableware (see DESIGN 134/44-47). DESIGNER *Ronald E. Brookes*. MAKER *Brookes and Adams Ltd.* From 3s 10d (beaker and tea plate each). **14** Examples from the *Melaware* range of tableware. DESIGNER *A. H. Woodful*. MAKER *Ranton & Co. Ltd.* DISTRIBUTOR *Melaware Ltd.* 7s 3d (cup and saucer). **15** Cup and saucer from the *Gaydon* range, a recently announced set of tableware again in melamine. The cup is produced in a split mould. DESIGNER *A. H. Woodful*. MAKER *British Industrial Plastics Ltd.* DISTRIBUTOR *B.I.P. Gaydon Ltd.* 7s 3d (cup and saucer).

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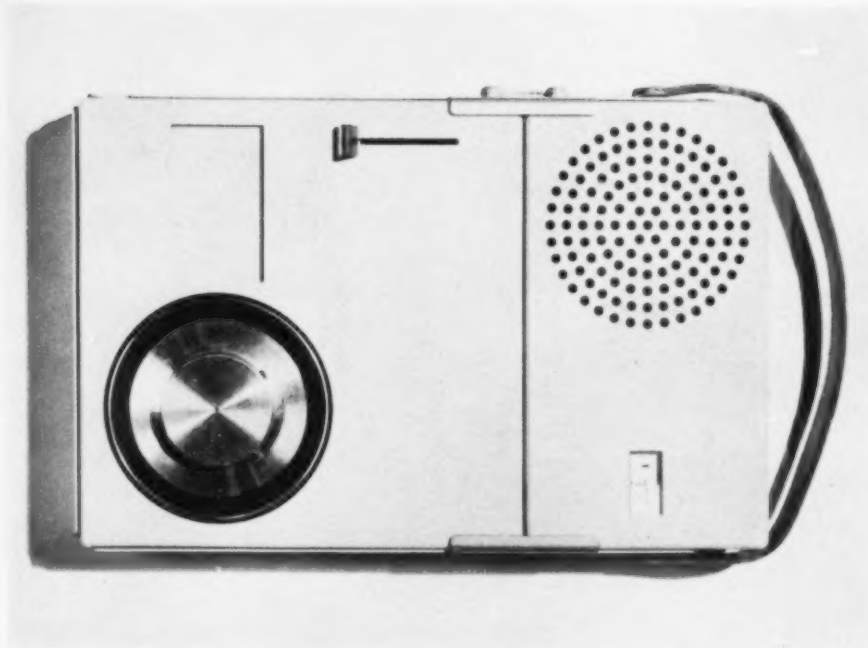
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16 Germany A prize was awarded for the best designed plastics product to be shown in the international display section of the recent *Interplas* exhibition, organised by *British Plastics* and *International Plastics Engineering* in co-operation with the British Plastics Federation. The winner, from the selection put forward by 11 countries, was Max Braun's combined transistor radio and record player. The case is moulded in polystyrene. The product measures only 10 × 6 × 1½ inches overall. DESIGNER *Dieter Rams*. MAKER *Max Braun*.

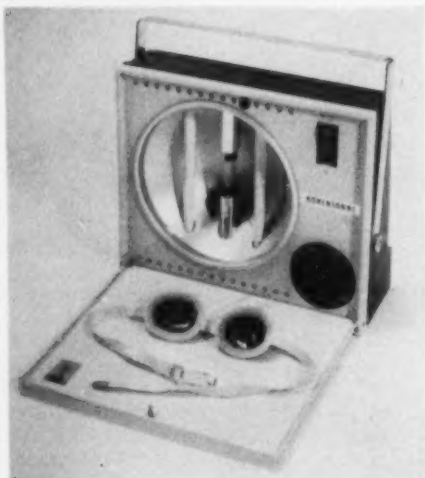
17 Germany In this portable ultra-violet lamp, glass, metal and polystyrene are successfully combined. DESIGNER *Reinhard Riemerschmid*. MAKER *Osrām GmbH*.

18 Switzerland Containers in polystyrene, designed to stack neatly. MAKER *Georg Utz AG*.

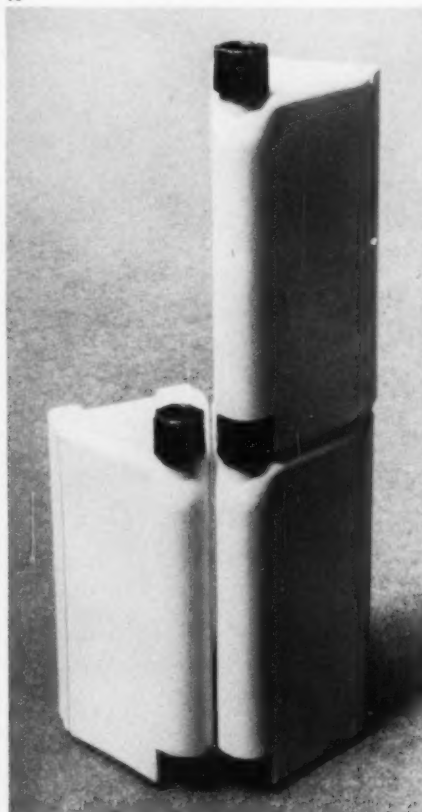
19 Denmark Melamine containers with a machined finish on exterior surfaces. DESIGNER *Kristian Vedel*. MAKER *Torben Ørskov & Co.*



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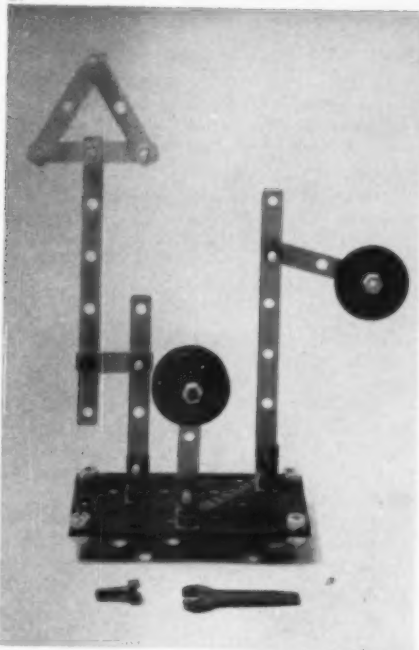
20 Germany Food mixer formed from three groups of plastics, melamine, acrylic and polystyrene. MAKER *AEG*.

21 Belgium Plastics here find an ingenious use in the toy construction kit. The screws and bolts are in polystyrene. MAKER *Le Bois Manufacturé S.A.*

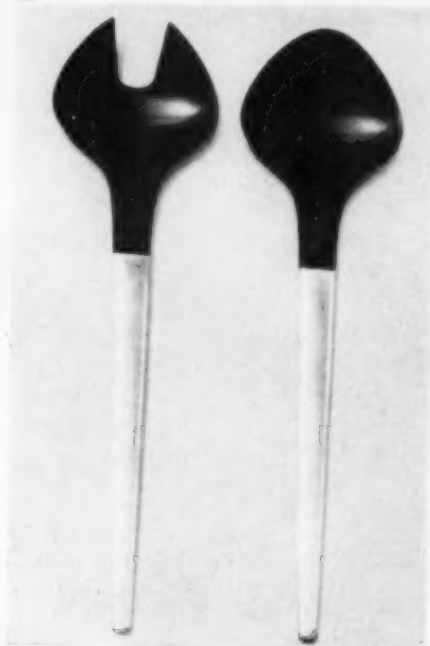
22 Denmark Salad servers: plastics can be treated as a high quality material. Here is the result of combining melamine and silver. DESIGNER *Henning Koppel*. MAKER *Torben Ørskov & Co.*

23 Switzerland Outstanding among Swiss designs was this bathroom cupboard in polystyrene. It is unusual to find furniture formed from other than laminated plastics, yet the detailing and production of this design are immaculate. MAKER *Alfred Stöckli Söhne*.

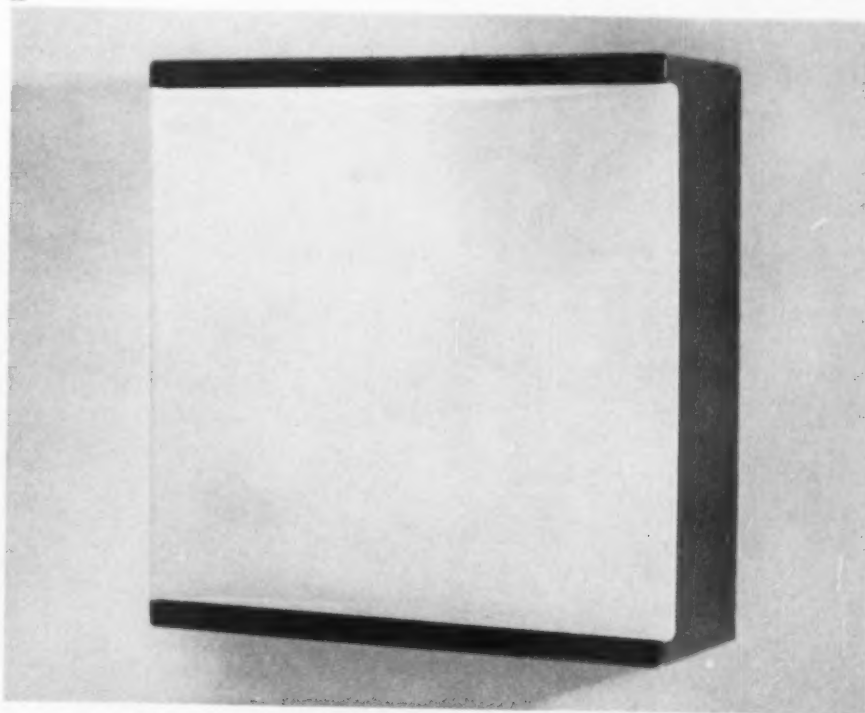
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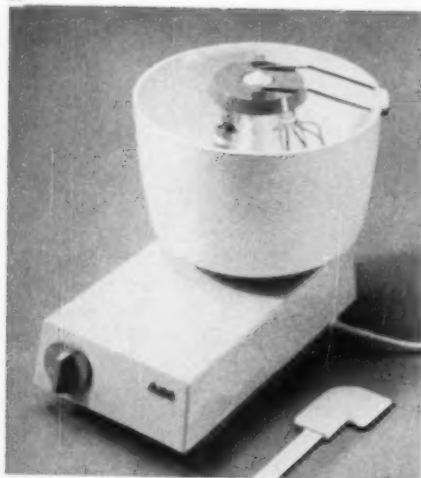
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BALANCE AND LUCIDITY

L. Oertling Ltd, the chemical balance maker, has already shown, in a range of precision balances of rather less than microbalance sensitivity, how the collection of mechanical devices which goes to make up the balance structure can be pulled together into a visually simple and logical unit (DESIGN 99/36-37).

The increasing use in recent years of ultra micro-analysis led to a chance for Oertling to produce its new decimicrobalance, which is 10 times more sensitive than the most delicate instruments previously made by the firm (being capable of measuring weights of as little as 0.1 microgrammes), and is claimed to be the only commercially produced balance of this sensitivity in the world.

Its beam unit, 2, contains no radical departures from established techniques, for it is simply a refinement of the basic two-pan device, which has here been further developed by the ingenious use of materials which, though ideal for their purpose, have not been easy to work with.

The beam, A B C D, is constructed of quartz fibres, and is hung from an aluminium casting by two fine quartz filaments, H. The beam is also linked to the aluminium casting by two quartz torsion filaments, K and L, the front one of which, K, can be rotated by a calibrated gearing system. The rear torsion filament, L, is attached to a quartz spring, N, which maintains a small but constant tension in the filament. The two torsion filaments are joined by tube F. By this means, any direct weight on the filaments is avoided, so ensuring that the torsional effect is independent of load.

Beam, pans and casting form a single unit, which is mounted in the balance case, and can be readily replaced in the event of damage.

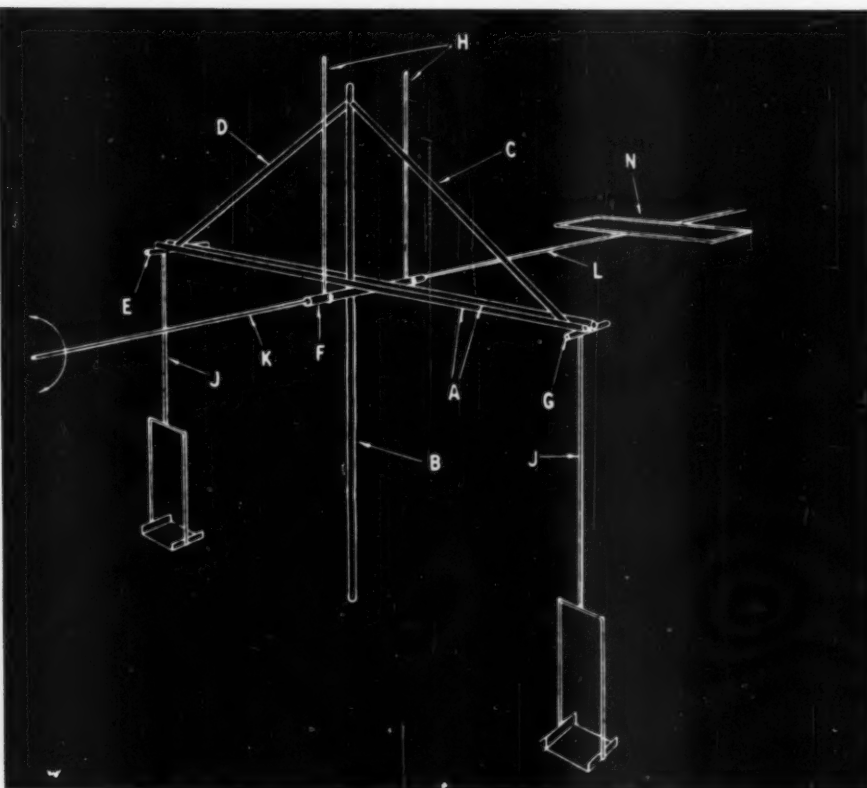
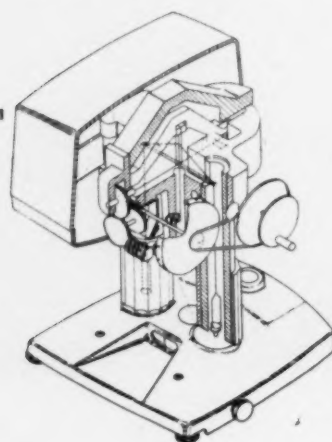
As before with its balances, Oertling called in John Barnes of Allen Bowden Ltd to cope with the

visual design. Mr Barnes' solution of his main problem - to draw together the various elements of the device (beam unit, pans, projected and enlarged pointer image, counting wheels and reading drum) into a lucid whole - goes a step further than before. Previously, at least one pan had always been visible; but now, the entire weighing mechanism is encased, and all that the operator sees is the engraved drum of the torsion head, the three counting wheels, and the ground glass screen in the base on which is projected an enlarged and illuminated image of the pointer. Oertling had done some ergonomic work on the positioning of these features before Mr Barnes was called in, assisted by some already published data*, and consequently he was able to place the controls in such a way as to limit to the minimum the eye movement necessary to see all three control areas. Both pans are enclosed in the thermally insulated tubes which form the 'legs', and the outer covering can be slid out of the way to provide access.

It is here that the only visual incongruity makes itself felt; and this, significantly, is the result of a deliberate attempt at styling. Mr Barnes had hoped to mask the thickness of the legs by means of narrow fluting; but their construction (glass fibre moulded round a brass tube) led to air bubbles forming in the plastics during production. The reject rate during the first batch production of the legs was about 85 per cent and it was decided that the only alternative was to go ahead with much broader fluting, which eliminated this source of trouble. Oertling is, however, now experimenting with new materials, with which it hopes to recapture the effect originally aimed at.

* K. F. H. Murrell, *Data of Human Performance for Engineering Designers*, Engineering, August - October 1957.

1 This view demonstrates how the beam unit, 2, is mounted on the aluminium casting. The handwheel and calibrated drum at the side of the balance connect with the gears which vary the torsion in the quartz torsioning filaments.







Overseas review : Sweden

DOMESTIC STORAGE INVESTIGATED

DOROTHY MEADE

Svenska Slöjdföreningen, Sweden's Society of Industrial Design, actively participates in the national programme of research into consumer needs which was described previously in DESIGN (151/72-77). As a result of energetic work carried out by Erik Berglund and his small team of research workers a series of extremely useful publications on basic dimensional requirements in furniture has been produced by the society and the first of these, on beds, was discussed in (DESIGN 135/46-47). Subsequently Skåp, a report on domestic storage requirements, and Bord, a study of dining tables and chairs, have been published by the society, and the following article summarises the former of these publications. The summary of this comprehensive work may at times seem obvious, but it spotlights many shortcomings in storage furniture available in Britain and a similar analysis of British conditions might well help manufacturers to provide furniture better suited to the particular needs of families in this country. A summary of the second publication, Bord, will be published in a subsequent issue.

The paraphernalia that clutters up our houses and has to be put away somewhere reaches alarming proportions when, on top of the essentials – clothes, bedding, food, utensils, cleaning and mending things – you add the books and papers, luggage, sports, games and musical equipment, ornaments, toys and miscellaneous bric-a-brac. One partial solution to the problem, the bonfire/jumble sale method, dodges the main issue of precision planning. But Erik Berglund has got down to the roots of the problem, and in his book *Skåp** makes a detailed study of all the belongings that accumulate in the average Swedish household, and of where and how they should best be kept.

The conclusion reached by Mr Berglund is, as one might expect, that only a highly versatile range of storage units can hope to meet the individual needs of a mass market – an interchangeable range which can expand and contract with the family, with adjustable insides so that a toy cupboard turns into a clothes store into a games cupboard, as required.

The problem, then, lies in deciding which are the optimum dimensions for such a range. And Mr Berglund has done this by studying surveys of family possessions and their space requirements, by measuring the articles to be stored and by practical tests. The articles governing the final choice of internal dimensions must be those common to all households, which need fairly uniform storage space and conditions: the large things; those which must hang or must be folded in a certain way; the delicate things; and the inflexible ones. Heterogeneous odds and ends can obviously be fitted into the larger dimensions.

* Erik Berglund, *Skåp*, Svenska Slöjdföreningen, 1960

A full translation of this book has been prepared by the Furniture Development Council, who kindly helped with the preparation of this article

Clothes storage

Hanging space. The great depth and height of cupboards needed for hanging clothes creates a major problem. Any built in cupboard deep enough to take a loaded clothes-hanger (2 ft) should be used primarily for clothes – and if necessary (and where possible) the linen cupboard should be converted for this. An internal height of 5 ft 11 inches is needed to allow room for an evening dress or dressing gown length, with sufficient clearance above the rail. An internal height of 6 ft 7 inches provides room to hang suits, skirts, shirts and blouses on two rails, one above the other. For an average family of four a total hanging rack length of 25 ft is needed which includes hanging space in the hall for outdoor clothes, and hanging space for out-of-season and unused clothes; a young child needs 3 ft; a school girl needs 4 ft; a husband needs 8 ft; and a wife needs 10 ft. Only 12 ft of the total is for indoor clothes in regular use; the rest is for seasonal and outdoor clothes.

A total rack length of 25 ft seems excessive by English standards. True, we have fewer and less bulky outdoor clothes than the Swedes, and it is normal practice to put away in suitcases or high cupboards the clothes out of season or not used. Even so, hanging space in most homes is not sufficient.

Whereas it is best to provide built in wardrobes for all hanging clothes, it is normally a mistake to build in all clothes storage; some free standing units for other clothes offer greater flexibility.

Men's underwear, shirts, etc

These are best kept on shelves, with the exception of socks, which should be in a drawer or tray. Most men's clothes fit into a shelf with a depth of 12 inches or 18 inches. No particular length is better than another provided the area is more than 12 inches × 18 inches. Drip-dry shirts, of course, need to be hung.

Women's underwear, blouses, jumpers, etc

Blouses need to be hung, because they crease easily. Other clothes are best kept in drawers, because they are soft and difficult to keep in tidy piles. Women's clothes can be folded to almost any shape. The largest things – petticoats, nightdresses, etc – need an area of 10-12 inches × 16 inches. A storage unit 3 ft 3½ inches wide × 1 ft 2 inches deep and 3 ft 4 inches high should provide enough space for one person's underclothes. The total space required for men and women is about the same, though drawers should be shallower, and at closer intervals, to best cater for women's clothes.

Children's clothes

These can be folded to almost any shape, and shelves suitable for adults can as easily be used for children. So there is no point in designing special fittings for children's clothes only, particularly as there is such a wide size variation between different age groups. Plastic boxes are useful for keeping small items in separate sections.

Linen

There should be a central storage area, near bedrooms, bathroom and kitchen. If the building has two storeys, it is wise to have a separate area for upstairs and downstairs use. Internal measurements should not be less than 1 ft 10 inches wide × 12 inches deep, to accommodate the largest items. Clearly, any bigger area can be used, as small things can be fitted in. Shelves 16 inches deep or more should have trays or removable shelves. Sheets can be kept on a fixed shelf.

If the linen cupboard is deep, with fixed shelves, either the shelves should be wide apart or their depths should vary, to give easy access. Shallow cupboards are often more practical to use. Spare bedding

A black and white line drawing of a clothing store interior. The top shelf displays various hats, including fedoras, bowlers, and flat caps. Below, numerous coats and suits hang on a rack. At the bottom, several pairs of shoes are arranged on the floor.

1 Hanging space for a family of four showing, from left to right, husband, wife, son, daughter.
2 The same clothes arranged in wardrobes.

To allow general comparisons with British furniture, dimensions in the text are given in inches (to the nearest half inch). Specific dimensions in centimetres appear on the drawings which are reproduced direct from Skåp. A rough conversion factor is 1 inch = 2.54 cm.

The image contains five technical drawings of wardrobe layouts, labeled A through E. Each drawing shows a side view of a wardrobe with hanging clothes, shelves, and shoe compartments. Dimensions are provided for each layout.

- Layout A:** Shows a wardrobe with a hanging section (100 cm high), a shelf (95 cm high), and a shoe compartment (9.5 cm high). The total height is 201 cm.
- Layout B:** Shows a wardrobe with a hanging section (100 cm high), a shelf (95 cm high), and a shoe compartment (9.5 cm high). The total height is 201 cm.
- Layout C:** Shows a wardrobe with a hanging section (100 cm high), a shelf (95 cm high), and a shoe compartment (9.5 cm high). The total height is 201 cm.
- Layout D:** Shows a wardrobe with a hanging section (100 cm high), a shelf (95 cm high), and a shoe compartment (9.5 cm high). The total height is 201 cm.
- Layout E:** Shows a wardrobe with a hanging section (100 cm high), a shelf (95 cm high), and a shoe compartment (9.5 cm high). The total height is 201 cm.

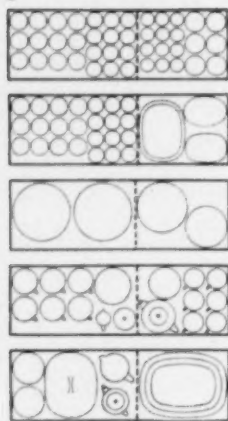
45-95

3 Plan and elevation showing two of several alternative solutions suggested for housing the same quantity of men's underwear – *left*, in five shallow drawers; *right*, in three deeper drawers.

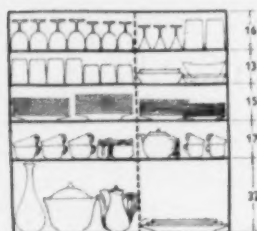
4 Two alternative arrangements for shelf space to contain linen for a family of four plus a guest.



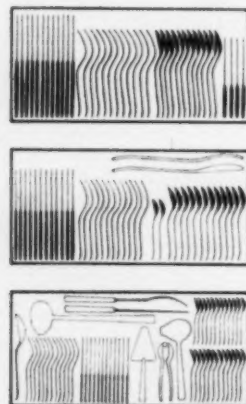
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30-95



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Best glass, china . . .

5 One of several suggested arrangements for storing the quantity of glass and china required by 12 people for any meal.

. . . and cutlery

6 Cutlery for 12 people stored in three shallow drawers.

and linen can be kept in a high cupboard above the wardrobe, but the odd spare blanket should be within easy reach. The linen for a family of four requires the same area as for one person's underclothes.

Best glass, china and cutlery

A total area of 16 sq ft is needed to store a set of 12 of everything – more than is found in the average sideboard. Tall things should be on a shelf, not a tray, with at least 1 ft between shelves. Other shelves or trays should be at about 6 inch intervals. Shallow shelves are best – a depth of 1 ft allows room for the larger articles like serving dishes, and everything is easily accessible. Things of identical size can be stacked (plates, bowls, two cups), but small plates should not be stacked on larger ones, or different sized bowls nested together. Glass, coffee set, tea set, tall things, should be stored in separate groups.

Sewing, ironing and mending materials

Ideally a special area should be allocated for clothes maintenance and sewing, with a table 2 ft x 4 ft or 5 ft with drawers for all the sewing things. Partitions within the drawers are unnecessary as it is easier to keep cottons, silks, scissors, zips, wools, etc in separate boxes. A nearby cupboard should contain clothes to be repaired, iron, ironing board, etc. Routine ironing is best done in the kitchen, near water, and between other jobs. Clothes to be ironed can be kept in a cupboard or basket near the ironing place. For home dressmakers a tall narrow cupboard is suggested, to take all impedimenta including ironing board and sewing machine.

Books

There is no point in calculating the average area needed for books, as people may have none, or thousands. But three shelf widths are recommended – 6½ inches, 10 inches and 12 inches – to allow for the wide variety of book sizes, and for space in bookshelves for files, gramophone records, photograph albums, magazines, etc. Suggested lengths are 2 ft and 4 ft, extendable by multiples of 8 inches to fit any combination of the storage dimensions recommended. A 1 inch vertical shelf adjustment is needed to make the fullest use of space, but a 2 inch adjustment gives fairly good versatility.

Conclusion

British storage furniture shows up badly in the light of this detailed analysis. For example, built-in hanging space in new houses is quite inadequate – 4 ft in a double bedroom is the most one is likely to find. And wardrobes, chests and storage units, no matter how carefully proportioned and finished without, are too often haphazardly planned within. In general, drawers are too high and deep for economical and accessible storage, shelves are too widely spaced with little or no adjustment possible, and frequently too deep for convenience; wardrobes are

Paper, documents, writing materials

A desk pedestal 16 inches wide, or a cupboard of the same volume, should accommodate the papers of the average household. Documents and rarely used papers can be kept in box files in the bookshelf. Drawers in the pedestal unit should be of varying depths – very shallow (from top to bottom) for pens, pencils, rubbers, paper clips, etc, and for paper; deeper (about 4 inches) for punches, staplers, glue-bottles, inkwells, etc.

Other factors governing dimensions

The dimensions of storage furniture are influenced, too, by dimensions of the human body, of the house and the rest of the furniture. Reach, working height sitting and standing, eye level, clearance below furniture for cleaning and clearance in front for bending should also be considered. If possible, storage furniture should fit in with wall lengths, door heights, window sizes, etc. And it should harmonise with the other furniture in the house.

Recommended dimensions

Based on all these factors, and reconciling the need for wide versatility with the manufacturers' need to limit the number of his production pieces, the following dimensions are recommended:

4 external depths of cupboard: 7 inches, 10½ inches, 14 inches, 20 inches.

2 external lengths of cupboard: 2 ft, 3 ft 4 inches, and a nest of drawers 16 inches wide.

Height is less easy to define. Four heights are suggested to fit in with Swedish building measurements and table heights:

15 inches – the distance in Swedish homes between the top of the door and the ceiling.

2 ft 1 inch – since with a 3 inch plinth this corresponds to a table height of 2 ft 4 inches.

3 ft 4 inches – which is half a Swedish door height.

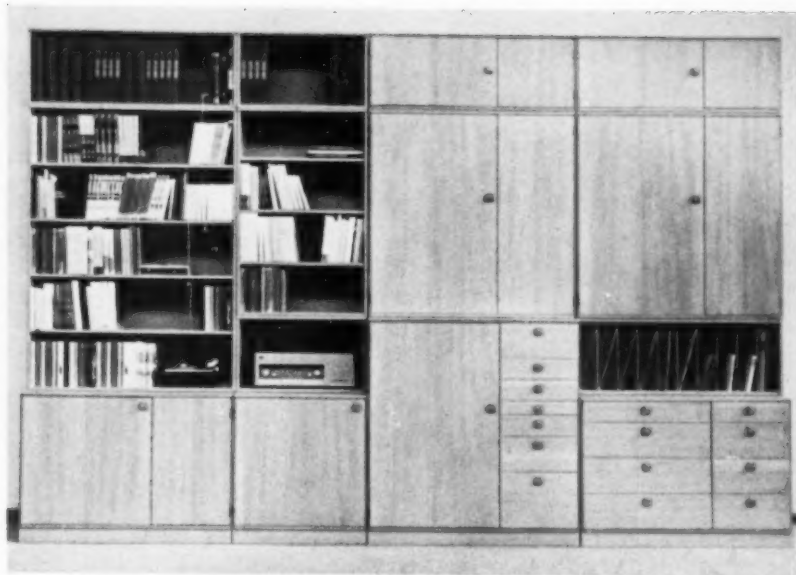
4 ft 7 inches – the distance between the top of a table and the top of a door.

Altogether these dimensions provide a total of 32 different cupboard sizes, a combination of which should provide economical and accessible storage for practically every home need. Interchangeable and adjustable internal fittings within the cupboards give an enormous range of choice and versatility.

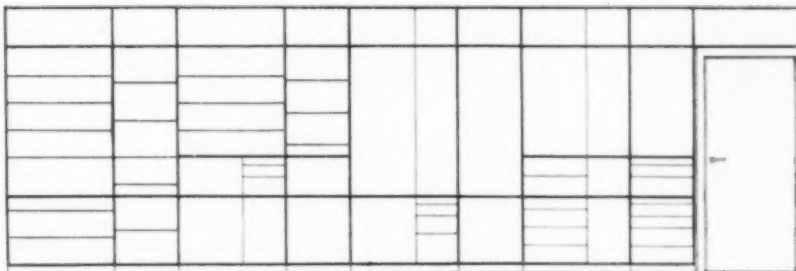
too shallow to avoid crushing clothes, and the space between the top of them and the ceiling is often wasted.

I spoke to a manufacturer about this Swedish report. "No one ever complains about our dimensions", he said, "and besides, no such statistics are available in this country". But the industry, in need of a spur to production, may well find it in a detailed study of consumer needs. It is all the more likely because of the acute shortage of living space, and the need to use every inch of it in the best possible way.

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Recommended dimensions

7 A storage unit built from components designed to the recommended dimensions.

8 This diagram shows how the dimensions of the proposed units relate to each other and to standard Swedish building dimensions.

9 To accommodate the various dimensions needed for different storage requirements a modular range of units is suggested. Each of the eight basic units shown here is intended to be

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available in four different depths giving a total of 32 related units. The external depths of the components are 35 and 50 cm.

Human factors governing dimensions

10 Diagrams showing maximum heights for shelves, drawers, etc., that can be reached or seen from varying positions and for varying purposes. This is one of many sets of diagrams indicating the human constraints on the design of storage furniture.

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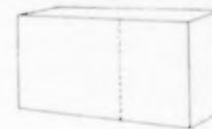
60 × 37,5



100 × 37,5



60 × 64,5



100 × 64,5



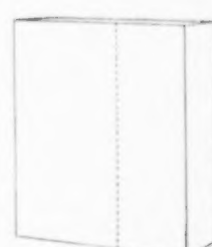
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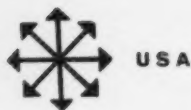
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114

TWO LEAVES ON ASPEN

Milner Gray reports on the 1961 Aspen Design Conference



USA



Berke Studio

Our United Airlines DC jet drops sharply down to Denver Airport on the penultimate lap of our westward journey from New York to the Middle West. Below, the serried ranks of neat suburban houses give way to the air-strip and to confetti like splashes of gaudy colour proclaiming the popular demand for parking space for a jumble of private planes and cars, all in the very gayest of liveries.

One night in Denver at the old-time Brown Palace Hotel and on by road, with Dick Crowther, Denver architect and one of the conferees, over Independence Pass (12,000 ft) to the former silver mining town 7,000 ft up in the foot-hills of the Rocky Mountains, now re-vivified by the imagination of the late Walter Paepcke of Container Corporation, the skills of Herbert Bayer and the late Eero Saarinen,

and the enthusiasm of those who have carried on Paepcke's ideas.

This was the eleventh *International Design Conference* in Aspen, Colorado, held on the grounds of the Aspen Institute for Humanistic Studies from June 18 - 24 to debate this year's conference subject - man / problem solver. Conferees were warmly welcomed by the year's president Hy Hoffman - "You're here because this week is an opportunity to listen, to think, to speak about matters of design" - and were ably guided by programme chairman Herbert Pinzke - "The designer often finds himself involved in, and planning for, change because that is one of his main functions. Not change as an end in itself but change as part of the progress of a developing society . . . Man's understanding of his environment is

improved through the study of evidence left by earlier man, which enables him to avoid making the same mistakes over and over again".

At a previous conference Saul Bass had explained: "Experts from other disciplines have been invited not only to establish relationships between their data and ours, but also to help us better evaluate our activities by subjecting them to critical examination". The principle was well observed this year. Biology, zoology, sociology, ophthalmology, cybernetics, education, music, poetry, marketing and business management, architecture, engineering, and – yes, let's be straight and on the level – design, were all represented on the platform. Russia in the person of Yuri Borisovich Soloviev, chief expert on industrial design, State Scientific and Technical Committee, Council of Ministers of the USSR, advertised as an undoubted attraction, somehow missed the bus and was certainly missed by all of us.

Procedure = $\div 3 \times 3 \times 1 + 4$

The conference procedure has been hammered out over the years; the annual topic is divided under three heads for discussion at three full day cycles, each with its own moderator and panel of four speakers. Each cycle consisted of a morning session held in the great tent designed by Eero Saarinen and attended by all conferees at which the panelists discussed their cycle subject, elaborating the ideas propounded in papers prepared and circulated to all conferees in advance of the conference. Each morning session was followed by four seminar sessions, held simultaneously in the afternoon, to which the panelists circulated for some forty minutes each for detailed discussion with, and a close questioning by, smaller groups of conferees, in the more intimate atmosphere of the seminar buildings.

The conference theme, as elaborated in the prospectus, was to study the dynamics of man's development as a problem solver and to enquire into the problem solving processes. These objectives were to be reduced by means of three tactical approaches planned for each of the three cycles. Cycle one, how "man becomes a problem solver – the factors ecological and inherited that have made man the problem solver he is today". Cycle two, that "all creative people are problem solvers – how people in other artistic endeavours and scientific disciplines see their world of problems. How they go about solving them". Cycle three, "the business of problem solving today and tomorrow – how and for what ends shall the problem solving abilities of man be utilised".

Big stuff this, providing the current American propensity for introspection with a fine range of opportunity for some passionate soul-searching and some quite surprising deviations from any narrow minded interpretation of the conference subject. Inevitably, man's proneness to problem making was touched upon by more than one but brushed aside as irrelevant. Inevitably, with the directive from cycle one, the conference began – under the guidance of Dr Herbert Zim and Dr Anatol Rapoport – an amazing historical tour of man's problem solving activities in order to achieve survival from the beginning of time: inexorably we moved to end with an examination of man's apparent will to self destruct-

ion. While wives, girl friends and truants bathed in the coolt of the Meadows swimming pool under the Buckminster Fuller geodesic dome, pedagogue and publicity designer sweated out their salvation in cycle and seminar. Sometimes as your reporter dozed in the heat of the great tent (temperature 90° +) he woke with a start to find the problem solving process at work aided by illustrations from the lives of amoebas, mackerels or monkeys in glowing words or glorious technicolour photo-enlargements.

They said:

"I would like to go way back for a moment and indicate that this matter of problem solving is not unique for a designers' conference; it is not unique for a group of educators. I imagine we could push the horizon back some 2 or 2½ billion years if we wanted to. Some time in that distant past a group of mackerel molecules got together and said 'let's make an organism' and when they made the first organism we had the first problems, and problem solving has been an inherent part of life ever since" (Dr Zim).

Man's life "... is a synthesis of all the things that he has known, so that he is a body of knowledge that does not just consist of various subjects but in a sense is a total attitude. Going back to what Dr Zim said of the organism and its environment, just as the amoeba, whose beautiful image is presented to us here (Dr Vishniac's coloured enlargements) has its own way of going, just over here he is climbing up ½ inch which is a mountain for him, the amoeba is thinking and feeling and acting with his whole body, his whole self. Well, in a sense this is what the human being does" (Dr Harold Taylor).

"Ortega said that really to know what our problem is we ought to look at the monkey in the cage; and a thing that made the monkey so nervous, hopping from a stump to floor, and floor to ceiling, was not that he was – but that symbolically he was – in a cage. The only way he could be alive was by constantly touching things, and he had to re-assure himself and escape from his fear continually by touching all the objects around him, observing constantly what went on around him in the world. This was his only form of protection and the only way of being alive" (Elizabeth Paepcke).

Sometimes your correspondent wondered whether he was awake or not – "Suppose you got up one morning and saw the sun rise in the West, what would you think? I would for a moment think that I am dreaming, and if I tried to wake up and couldn't, then I would call for a psychiatrist" (Dr Rapoport).

A breath of soul revealing honesty from poetess Gwendolyn Brooks – "Well, first of all I hardly deserve a place at this table because I do not believe it is the province of the artist to solve problems. I feel that he should be an eye, an ear, a mind, a heart; but I think that solving problems should be left to others who are more active and perhaps more muscular. I feel that when he has given his best and has written as well as he can about things that he deeply feels – well, that material there will provide activity for the true fighters and real problem solvers" – who also read excerpts from her own works: "We real cool. We left school. We lurk late. We strike straight. We sing sin. We thin gin. We jazz June. We die soon".

In the afternoon seminar, speakers and conferees battled with problems more intimate to the designer's normal life: his perceptive faculties and the mechanics of the human eye (Dr Kronfeld); the common sense versus the scientific approach to the solution of industrial design problems (Tomás Maldonado), and how this may vary with the structural and functional complexity of the particular task – "A coffee cup, an infra-red grill, a lawn mower, a helicopter and an electronic data processing machine do not constitute design problems of the same nature, problems which would be set and solved in the same way". To your correspondent this all seemed to point the moral that if only the right questions were to be asked the right answers need not be far behind.

In the evenings the conferees were nourished by films and music in the nineteenth century opera house: entranced by the underwater colour photography of one of the fascinating worlds in which Dr Vishniac lives and works, or listening to the guitar of Richard Pick.

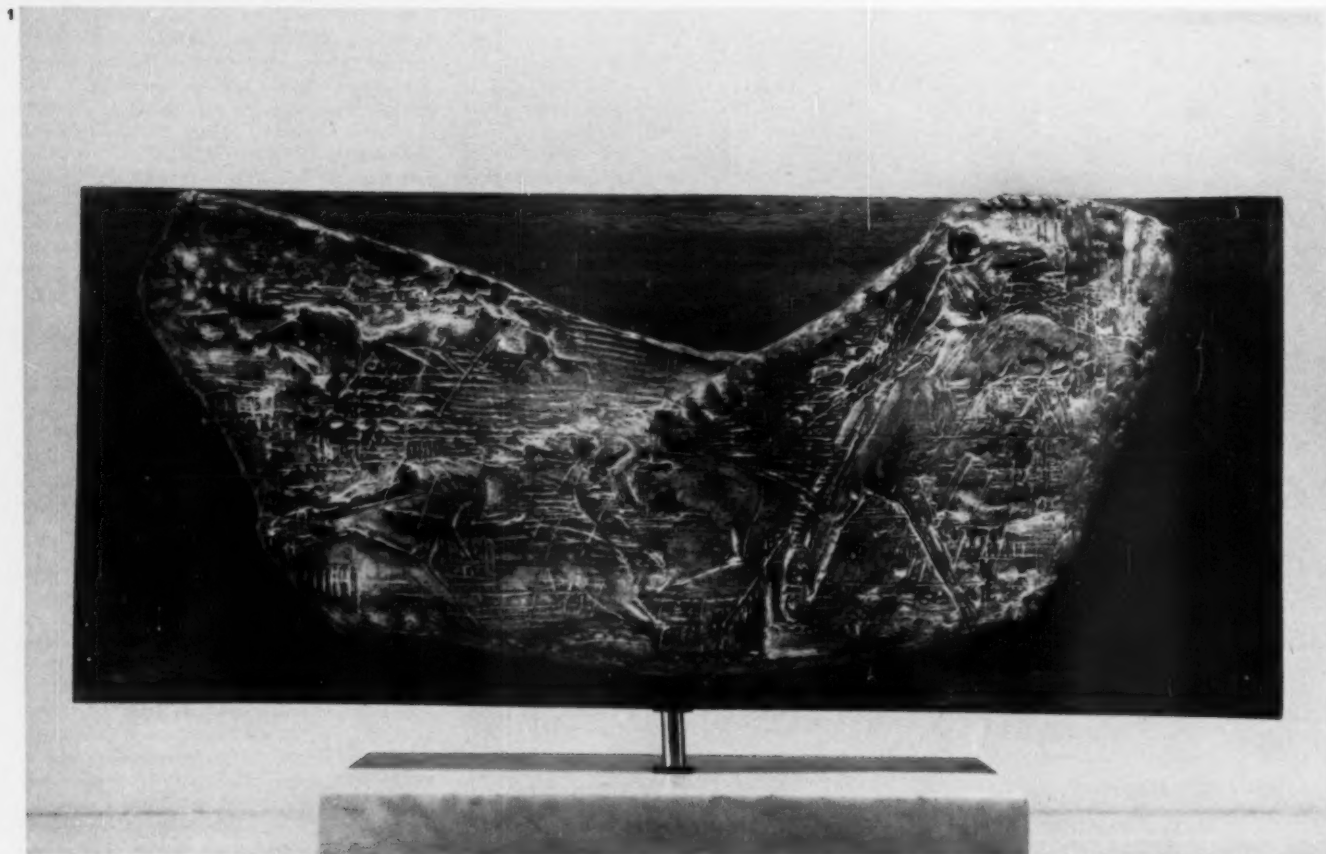
Moral responsibility

But the keynote of this conference, its recurrent theme, was the designers' moral and social responsibilities in an unstable world, summed up in the opening sentences of Dr Taylor's 'keynote address': "What I want to say is simply this: twentieth century man has been incredibly successful in solving the secondary problems of scientific advance and technical progress. He has failed to solve the major problem of building new institutions to contain the force of the advances. As a result, the liberal values and the humanitarian ethic which alone can make a new world richly habitable are on the defence and fighting for their lives. On the one side, there are the masses of the world's people with their needs daily becoming more desperate. On the other side are the governments manipulating social, psychological, economic and political forces through the use of weapons, mass media of communication, threats and military strategy. In between are the rest of us – teachers, designers, architects, writers, painters, composers, sculptors, lawyers, businessmen, doctors, and all those who live in the kingdom of the educated, everywhere in the world.

"I hold that it is up to us to mediate between the needs of the human race and the governments who at this moment are in control of it, to move those governments back to their rightful place as the servants of mankind and out of their present place as the masters of us all. I hold further that it is the failure of the educated to commit themselves to this responsibility that has allowed the major problems of mankind to remain unsolved. This is the new treason of the intellectuals."

The most lasting contribution which this annual conference makes to the sum of our aspirations as designers, lies not so much in the importance of the official topic or the brilliance of the speakers so assiduously recruited from such far flung fields of endeavour, but in the planned opportunities provided for informal meeting and discussion in this magical setting. This is something which should not be missed either by designers or by users of design.

MISCELLANY



Made to measure

Two recent awards made to sculptors after competitions launched by commercial or semi-commercial patrons suggest that a more liberal and imaginative set of criteria is being applied by the judges concerned (or perhaps, more accurately, by those responsible for choosing the judges).

In choosing the winning design for this year's *Topham Trophy*, 1, awarded annually by Tophams Ltd of Aintree Racecourse as a steeplechase prize, the judges (Professor R. Y. Goodden; Paul Reilly; Hugh Scrutton; Austin Wright; and T. C. Greenwood) specifically set out to find a design which was original and exciting enough to be as stimulating as any trophy should be. John W. Mills, the sculptor, himself remarked that his design "must be a trophy – not only a piece of sculpture, but something suitable to be presented to the winner of a race: so I set about evolving a shape that would symbolise victory. I selected this particular shape because it best suited the pictorial element I designed to make the trophy unique and belonging to the steeplechase . . . the jump, the sweeping movement of the race, and the finish".

The same emphasis on 'fitness for purpose' is shown in the comments of the jury (Sir Hugh Casson; Sir Kenneth Clark; James Fitton; and Sir Gordon Russell) on a competition organised by Mullard

Research Laboratories for a sculpture symbolising the work of an electronics research laboratory: "The jury's feeling about the maquettes submitted was that many of the sculptors did not consider sufficiently the purpose of the exercise and the suitability of their conception for the site . . . As to the winning design, 2 . . . its symbolism was clear, its handling competent, it could stand enlargement to the necessary scale, it would compare agreeably with the architecture, and would take floodlighting well."

Keith Godwin, the sculptor, found the demands of a commission stimulating – "Other people's expertise is always intriguing". He eventually found himself attracted to the simple statement, 'opposite poles attract, like poles repel': "I found the drawings, which I always do when beginning a job, were concerning themselves quite simply with basic electrical concepts which then became shapes on their own."

Both designs, then, draw their firm directness of appeal from a carefully thought out conception; art created not for its own sake but for a purpose is clearly, at least in these individual makers, stimulated rather than confined. Better still, spontaneity is not lost: as Mr Godwin remarked, "when written down it all sounds terribly self conscious – in reality, it's a blind grope till something clicks".

D.C.

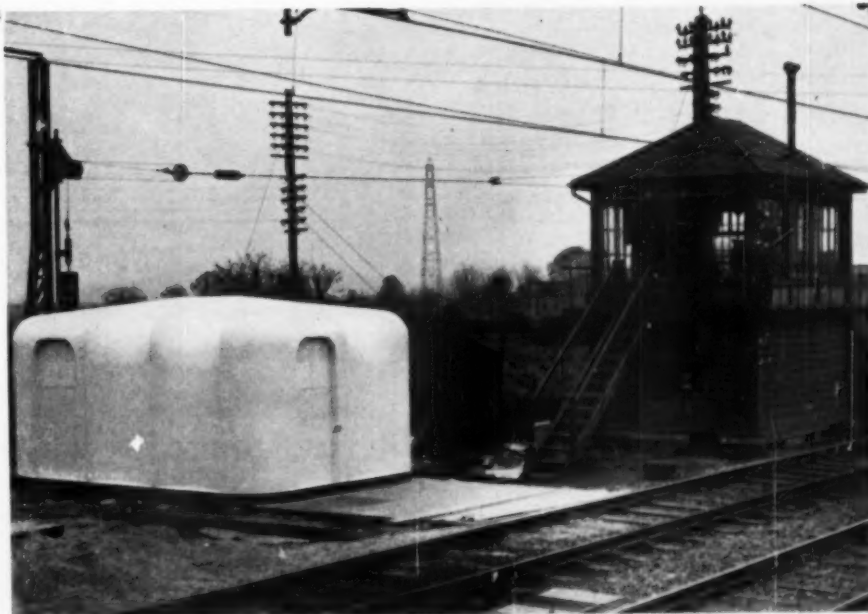


Prefabrication on the line

A recent article on stations and station equipment (DESIGN 148/53-63) suggested that British Railways had not been able to take full advantage of the possibilities of prefabricated building components, and that the technical and economic advantages of factory produced buildings make them particularly relevant to railway architecture.

BR Eastern Region has now shown that prefabrication can take realistic advantage of the newer materials now available. In the process, BR has begun a minor revolution in the design of specialised buildings for which, through site or maintenance difficulties, conventional methods are unsatisfactory. This is particularly true of many new line-side ancillary buildings which have to be erected on sites with restricted access or which may need enlargement. The prototype signal relay room, 3, recently erected at Thames Haven junction in Essex, is the first of its kind in Britain, and is the result of lengthy research into building to these specialised requirements.

The buildings are composed of three basic types of unit – a corner unit and side units of two different spans. The smallest building that can be erected is 14 ft x 14 ft, and the span can be increased to 18 ft 9 inches, 23 ft 6 inches or 28 ft. The smallest unit weighs 2 cwt, the largest 4 cwt. A unit comprises wall and roof in one shell of double curvature, with outer and inner laminates of polyester reinforced with glass fibre containing a core of ½-inch phenolic foam. The units are bolted together with stiffening

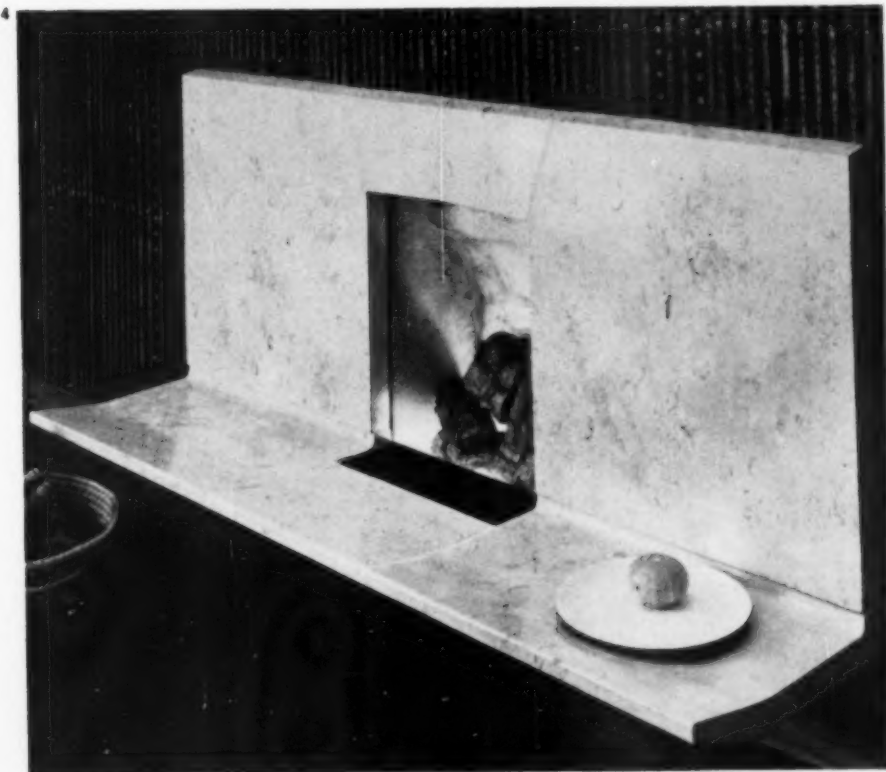


flanges of solid polyester. The erection of the prototype, on prepared *in situ* concrete, took four hours.

The new building was designed in the Eastern Region architect's office (regional architect H. H.

Powell), under the general direction of A. K. Terris, chief civil engineer, and in association with the assistant director of research (chemical services) BTC.

ARCHIE MCNAB



Hearths of stone

Wren Fireplaces, of Bath, recently commissioned John and Sylvia Reid to design a range of unit stone fireplaces. From a limited number of stones, fireplaces of many different widths can be supplied. Jambs in 9, 21 and 27 inch lengths, heads for 16 or 18 inch fire openings, and hearths in matching sizes are available, and special widths can also be supplied.

Wren Fireplaces, the latest enterprise of The Bath and Portland Stone Firms Ltd, has revived for this range, as "a symbol of fine masonry", the old 'wine-glass' quarry mark, 5, which first attained celebrity during the building of St Paul's Cathedral.



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Barbour Index 143

NEWS

EXHIBITIONS

Full scale Finland

Finlandia, an exhibition of modern Finnish design, is to be held in the Victoria & Albert Museum from November 17 - January 7. The exhibition itself, the poster and the catalogue are to be designed by Timo Sarpaneva. Work by all the leading Finnish designers, including Tapio Wirkkala, Kaj Franck, and Alvar Aalto, will be on show. H. O. Gummerus, of the Finnish Society of Crafts and Design will lecture on November 23 (6.15 pm).

British books

If there is such a thing as a contemporary idiom in design, it is certainly not to be found in British books: the 92 examples chosen by the three selectors for this year's *Exhibition of International Book Production* at the National Book League are very much the mixture as before. Is this due, one wonders, to an over-conservative outlook among the higher echelons of publishing or to a lack of imagination among their designers? Or is it the result of an attitude, common among the larger book printers - happily, a few of their middle-sized colleagues are worthy exceptions - that anything unusual is too difficult or too expensive?

Whatever the causes, the results could be compared at this exhibition with the willingness-to-experiment of American book designers; the sophistication of their French, Dutch and Hungarian counterparts; and the liveliness of the Poles. In view of their recent record in other fields of design, it is a pity the Italians failed to send any books to the selectors. It is notice-

able in this year's exhibition that the British examples seem to follow the current fashion for 'lavish' and expensive books, while we shall have to wait for next year to demonstrate the visually exciting 'egghead' paperbacks now being published.

Of course, there are good things to be said about British books. Paper and other materials are almost invariably of good quality and the general level of machining and technical production is high, while the price of books in relation to those of other commodities is still absurdly low. The situation, in fact, is rather like that in wide areas of British industrial products - a sound reliable job, but a bit behind the times... Perhaps the coming challenge of photo-setting will change it.

ANTHONY ADAMS

COMPETITIONS

Poster progress

Posters which have been displayed between April 1 1961 - March 31 1962 are eligible for the CoID's *Poster Design Awards*, which will be announced next year (DESIGN 148/85).

There will be a maximum of 25 awards, and entries should be submitted to the CoID between April 1 and April 30, 1962. Further information is available from the Promotion Office, CoID, 28 Haymarket, London, sw1.

Furniture awards

Details have been announced of the 1962 *Aeropreen Awards*, a new annual furniture design competition (DESIGN 152/69). Changes in the rules involve the

abolition of the age limit (the award is now open to all qualified designers, architects and engineers, and to students), and a new emphasis on the methods of applying cushioning material and covers and on suitability for production.

Prizes of £300, £150 and £50 are offered, and the panel of assessors includes: Ernest Rae (chairman of the panel), F. J. Bristow, past president, High Wycombe Furniture Manufacturers' Society, and F. H. K. Henrion, president of the Society of Industrial Artists. Full details are available from the secretary, Aeropreen Award Committee, Lindsay Avenue, High Wycombe, Bucks. The closing date is February 10, 1962.

International invitation

On the initiative of the German magazine *Der Druckspiegel* an international competition for the design of an invitation card is being organised by members of the Eurographic Press group (including *Print in Britain* and the *Litho-Printer*).

The invitation card is for the opening next year of DRUPA, the printing and paper exhibition held annually in Düsseldorf. Full details are available from *Print in Britain Ltd*, 97 Jermyn Street, London sw1; entries from competitors in this country should be sent to the above address, post marked not later than December 1.

APPOINTMENT

Audrey Withers, formerly editor of *Vogue* has joined the public relations division of J. Walter Thompson

continued on page 75

Book man

These posters were designed by John Sewell as part of the City Bookshop's promotion campaign; Mr Sewell is con-

sultant designer to the firm, and its sister shop, Better Books Ltd, in Charing Cross Road; he also designs the graphic

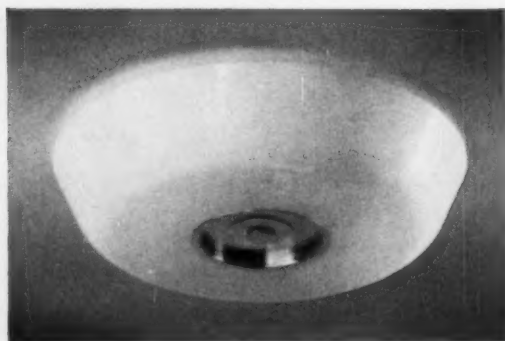
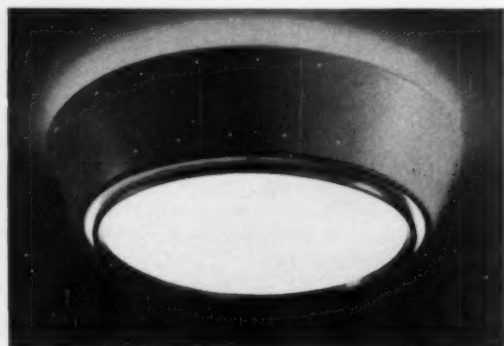
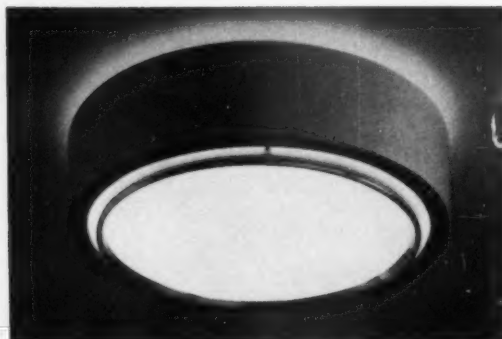
material for John and Edward Bumpus Ltd and *The Book Society's* magazine.



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Co Ltd; she will be concerned with all aspects of fashion and decoration promotion.

MISCELLANEOUS

Plastics and rubber confer

Europlastique 62, the first European Plastics and Rubber Conference, will be held in Paris from May 18-29, 1962, under the auspices of the International Union of Pure and Applied Chemistry.

The conference will include sessions devoted to reinforced plastics, research, manufacture, application, and economics. Full details are available from Du Mont Publicity Co, 18 Queensberry Place, London sw7.

Tweed in Holland

A group of Scottish tweed designers took part in an experimental summer school course in Holland recently.

The group studied the Dutch textile industry and standards of taste and style, and concluded that "art in Britain is largely treated as though it were an optional veneer in life; in The Netherlands it seems to be regarded more as an integral part of life". And this seems to lead to livelier attitudes in industry: the designers found in the Dutch textile industry a greater readiness to scrap obsolete methods and adopt new techniques than is usual among many British firms.

The course, which was arranged by the department of extra-mural studies in Edinburgh University, proved so successful that it may become an annual feature.

Drawing office investigation

An international survey of the management and function of design departments and drawing offices

Young bloods

A new firm, *Design Associates*, has been formed by three designers who recently left the LCC Central School of Arts and Crafts, R. Brockbank, R. C. N. Cruikshank and Michael Wolchover. The firm covers interior and industrial design, and both designs and makes furniture, an example of which is shown BELOW.



in the mechanical and electrical engineering industries is being carried out simultaneously for OEEC in Austria, Belgium, France, West Germany, Italy, The Netherlands, Portugal, Sweden and the U.K.

The British report is being prepared, at the request of the Board of Trade, by the British Institute of Management in conjunction with the British Productivity Council.

A questionnaire (which is the same in each country in which the survey is being carried out) will cover the status of the design and drawing office in the organisation as a whole; the organisation of its work; and the responsibilities of the office with regard to the end use of the product, etc. A final section will deal with current design techniques, policy and drawing office methods.

Further details about the survey are available from the British Institute of Management, 80 Fetter Lane, London EC4.

New standards

A new section of BS 3456: *Testing and Approval of Domestic Electrical Appliances*, has just been issued. Designated *Section B4*, it covers electrical hairdryers and replaces BS 3296. This move is a part of the gradual assimilation of all British Standards for domestic appliances under the BS 3456 heading, which is concerned with electrical and mechanical construction as it affects safety, durability and reliability in service.

Another new standard, BS 3378: *Domestic Heating Stoves using Coke and Other Solid Fuels*, lays down performance requirements and essential design features for most household stoves on the British market.

Revised editions have also appeared of BS 2481: *Typewriters* and of BS 3176: *Printed Matter and Stationery*. Copies of the standards are available from the British Standards Institution, Sales Branch, 2 Park Street, London w1.

LETTERS

Experiments in graphics

Sir: I was most interested in your analysis of the problems and suggested solutions to the design of *Radio Times* (DESIGN 150/68-77). I like your emphasis upon the need for experiments, which can be quite simple - as you so rightly point out. Any relevant measurement is better than none.

I think your points about headings are well taken. I would like to see a simple experiment in which a few typists are given a copy in each of the two layouts, with a simple list of questions about programmes which can be answered by reference to the copies, eg, "What's on TV at 9 pm on Thursday?" Such tests would establish which layout would give the shorter average time per answer, and would indicate whether an even better layout should be devised.

E. C. POULTON
Applied Psychology Research Unit
Medical Research Council
15 Chaucer Road
Cambridge



Design for blind workers

Peter Hayward designed this stool for General Welfare of the Blind. The design is part of a scheme devised jointly by the Society of Industrial Artists and General Welfare for the Blind to make available well designed goods which can be made partly or wholly by blind people, and sold in the Tottenham Court Road shop. The stool, which will be available in December, is made in cane or upholstered in hide; the polishing of the frame will also be done by blind workers.

Selective viewing

Sir: I was interested in the design analysis of *Radio Times* and would like to make these comments:

I think you are wrong in assuming that people are not likely to alternate much between TV and sound within one evening. This may apply to those 150 households in which TAM ratings are interested, but the more discerning person prefers to select his entertainment either from TV or sound radio - in which case the placing of all these programmes in day sequence is more practical.

I cannot agree that the placing of programme times beyond the ranging line is ugly, although the style that you have set out is very pleasing. Another favourable aspect is pictorial relief, and this is now much improved. Similarly, the restyling of the editorial page is no longer as garish and confused as it was prior to redesign.

E. H. CREAMER
Publicity Officer
The Co-operative Party
54 Victoria Street
London sw1

Down with the benevolent despots!

Sir: I read with interest *Basis for Design* (DESIGN 151/39) and also *Co-ordination for Consumer Research* (DESIGN 151/72-77).

While I would agree that the techniques of consumer research as they are normally understood are not entirely suitable where design is concerned, there are other methods of testing markets available, and there is no difficulty in the manufacturer's obtaining disinterested evidence of what the consumer wants.

I would disagree very strongly with the implications of the contributions in question, which appear to suggest that the consumer should be told to take

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NEW

NEW

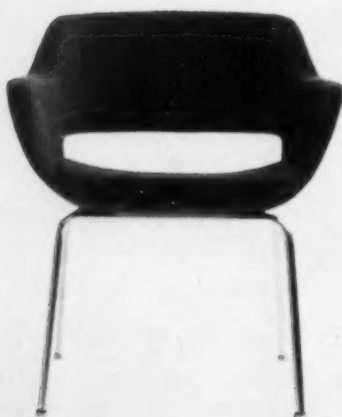
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what is good for him and not what he wants. I can see no reason why the consumer should not be given what he likes, even though this does not necessarily agree with the theories of a certain school of design. It is not impossible to find out the way that the mind of the consumer is moving and I should have thought that it was in the interest of the designer to try to meet these requirements rather than to impose arbitrary standards. An attempt to argue the opposite viewpoint seems to be approaching remarkably near to a political philosophy which I believe would be disastrous for this country even although I recognise that it exists.

There is at the present time a tendency to try to standardise everything whether it be design, or even materials, and I think that this is a tendency to be regretted, particularly in view of the importance of export markets to this country. This tendency to standardisation implies that the manufacturer who has individual ideas and tries to sell them is pursuing a slightly improper course, and surely this is one of the basic things that is wrong with British industry today. If we are to maintain our position in world markets we must use aggressive selling techniques, and that means new ideas, techniques, materials, and a willingness to do something 'outrageous'.

After all, the supremacy of this country was built up by the individuality of manufacturers, and although this individuality tends to be a rather negative factor today, I think it would be a great pity to try to impose common standards rather than to encourage the individual to 'have a go'.

On the one hand we can see an effort to break monopoly by means of the *Restrictive Practices Act*, but it would appear that on the other hand we are trying to replace this by another kind of monopoly imposed from above. This course does not seem to me to be in the best interest of the country as a whole, and I think that it would be rather unfortunate if the CoID - which is, after all, a semi-government organisation - should give the appearance of being in favour of such a course.

E. P. DANGER
43 Duke Street
London SW1

Market techniques

Sir: I have read with interest *Basis for Design* (DESIGN 151/39). The second paragraph suggests that "commonly practised market research techniques" are inadequate for obtaining objective information directly from the consumer because "these rely too much on the opinion of the interviewee and too little on disinterestedly observed evidence".

This comment does not do justice to the skill and experience which has been built up by market research practitioners in this country in the course of many thousands of surveys over a period of years. The skilled market researcher is certainly well able to ascertain the opinion of the interviewee when such an opinion is the subject of the research. He is also skilled in designing forms of questioning which will minimise the effect of personal prejudice on the part of the interviewee. He is equally capable of designing methods which may include personal observation and inspection by trained observers in cases where experience has shown him that questioning tech-

niques are unreliable. These methods of market research are in fact used in appropriate instances by that very Swedish Institute which you hold up as a shining example.

We would certainly agree with your premise that designers and manufacturers for the mass market need more factual knowledge about the habits and preferences of the people who are going to use their products. We would equally support your suggestion that the Government or the philanthropic institutions would be doing industry and the community a service by sponsoring such research. We are, however, confident that the need for market research is such that publicly sponsored surveys of this type would very largely supplement rather than substitute for the considerable amount of market research already being carried out by private enterprise.

DAVID LOWE WATSON
The Market Research Society
39 Hertford Street
London W1

New alphabet

Sir: On re-reading your article *Lettering & Legibility* (DESIGN 152/56-61), I feel that it may be of interest to illustrate these examples of the new alphabet designed for the new passenger building at London Airport Central. The alphabet was drawn by Matthew Carter and the signs have been designed in conjunction with the architect Frederick Gibberd.

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COLIN FORBES
63A Montagu Square
London W1

BOOKS

Typographica 3

Editor Herbert Spencer, Lund Humphries, 12s 6d

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Arrivals

London Airport lettering (see New Alphabet).

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continued on page 79

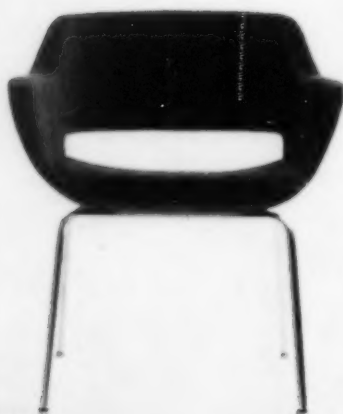
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by Mayakovsky) carried news at all cost – and in even greater emergencies, teams were sent to the railway stations to transform trains into pictorial messengers which covered districts not reached by print or radio. The need for the maximum utilization of material resources within a minimum of available media was an intellectual stimulant governed more by a compelling pedagogic spirit than by propagandistic needs.

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Studio Books, £2.25

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J. CHRISTOPHER HEAL

The design of research laboratories

Nuffield Foundation, Division for Architectural Studies, Oxford University Press, £2.50

The Nuffield Foundation set up its division for architectural studies in 1954, and the study of research laboratories was its first project. Although the well known hospital investigation was more in the public eye, the laboratory studies have been proceeding, and are drawn together in this book.

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The Netherlands Design Centre (design 152/77) opened by Helen Dubens Artware Ltd is not promoted by the Netherlands Government.



This month's cover

This month's cover was designed by Ruth Gill who is art director of Mather & Crowther Ltd. Before joining this firm she worked as art director for John Tait Partners Ltd.

a strikingly improper course, and surely this is one of the basic things that is wrong with British industry today. If we are to maintain our position in world markets we must use aggressive selling techniques, and that means new ideas, techniques, materials, and a willingness to do something ‘outrageous’.

After all, the supremacy of this country was built up by the individuality of manufacturers, and although this individuality tends to be a rather negative factor today, I think it would be a great pity to try to impose common standards rather than to encourage the individual to ‘have a go’.

On the one hand we can see an effort to break monopoly by means of the *Restrictive Practices Act*, but it would appear that on the other hand we are trying to replace this by another kind of monopoly imposed from above. This course does not seem to me to be in the best interest of the country as a whole, and I think that it would be rather unfortunate if the Coid – which is, after all, a semi-government organisation – should give the appearance of being in favour of such a course.

E. P. DANGER
43 Duke Street
London SW1

Market techniques

Sir: I have read with interest *Basis for Design* (design 151/39). The second paragraph suggests that “commonly practised market research techniques” are inadequate for obtaining objective information directly from the consumer because “these rely too much on the opinion of the interviewee and too little on disinterestedly observed evidence”.

This comment does not do justice to the skill and experience which has been built up by market research practitioners in this country in the course of many thousands of surveys over a period of years. The skilled market researcher is certainly well able to ascertain the opinion of the interviewee when such an opinion is the subject of the research. He is also skilled in designing forms of questioning which will minimise the effect of personal prejudice on the part of the interviewee. He is equally capable of designing methods which may include personal observation and inspection by trained observers in cases where experience has shown him that questioning tech-

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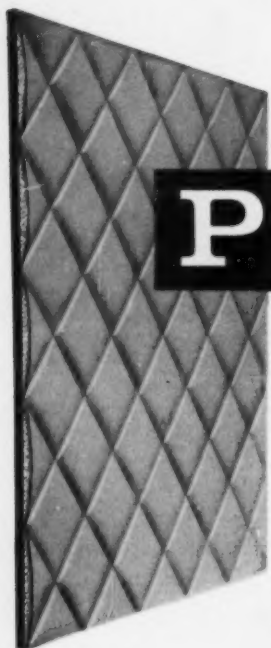
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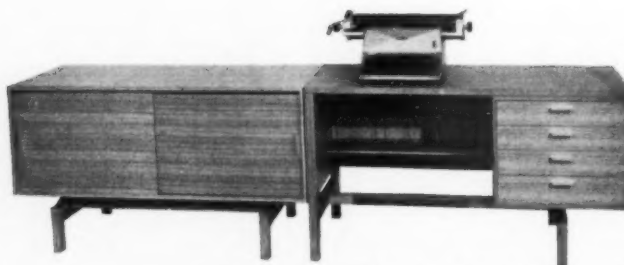
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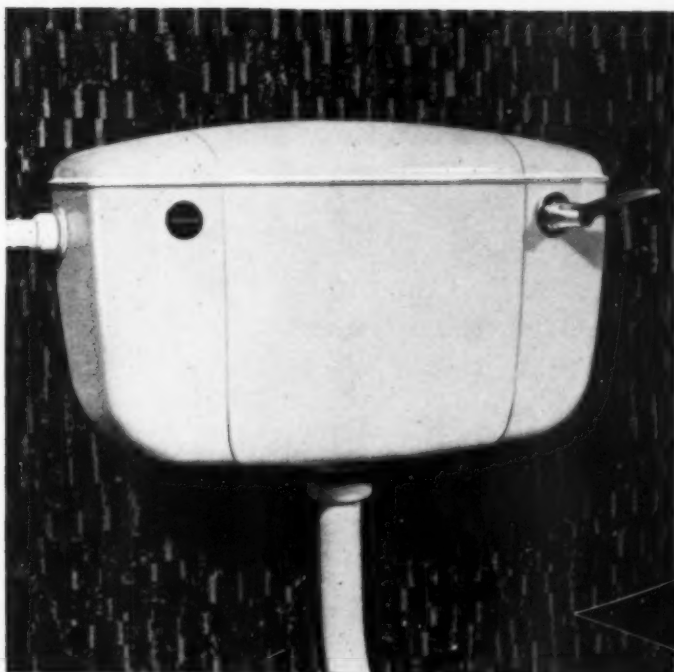
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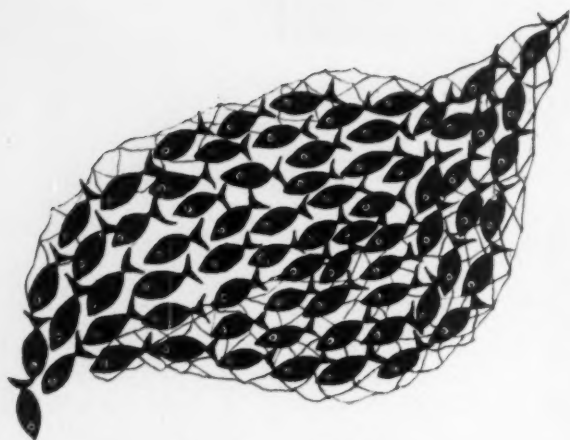
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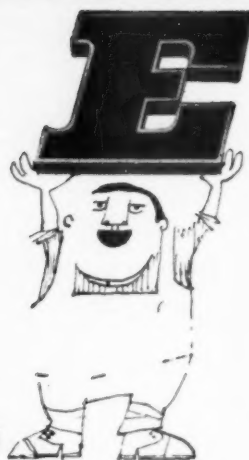
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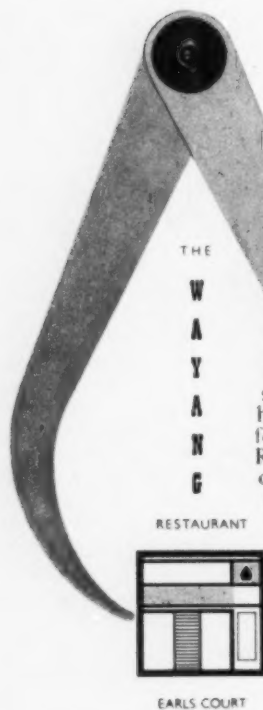
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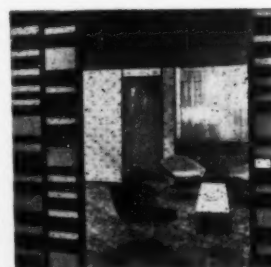
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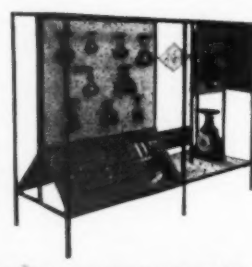
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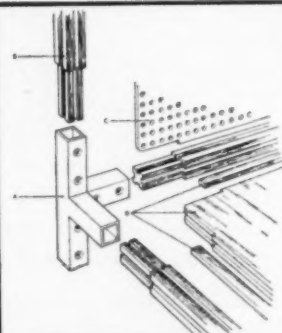
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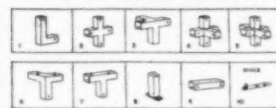


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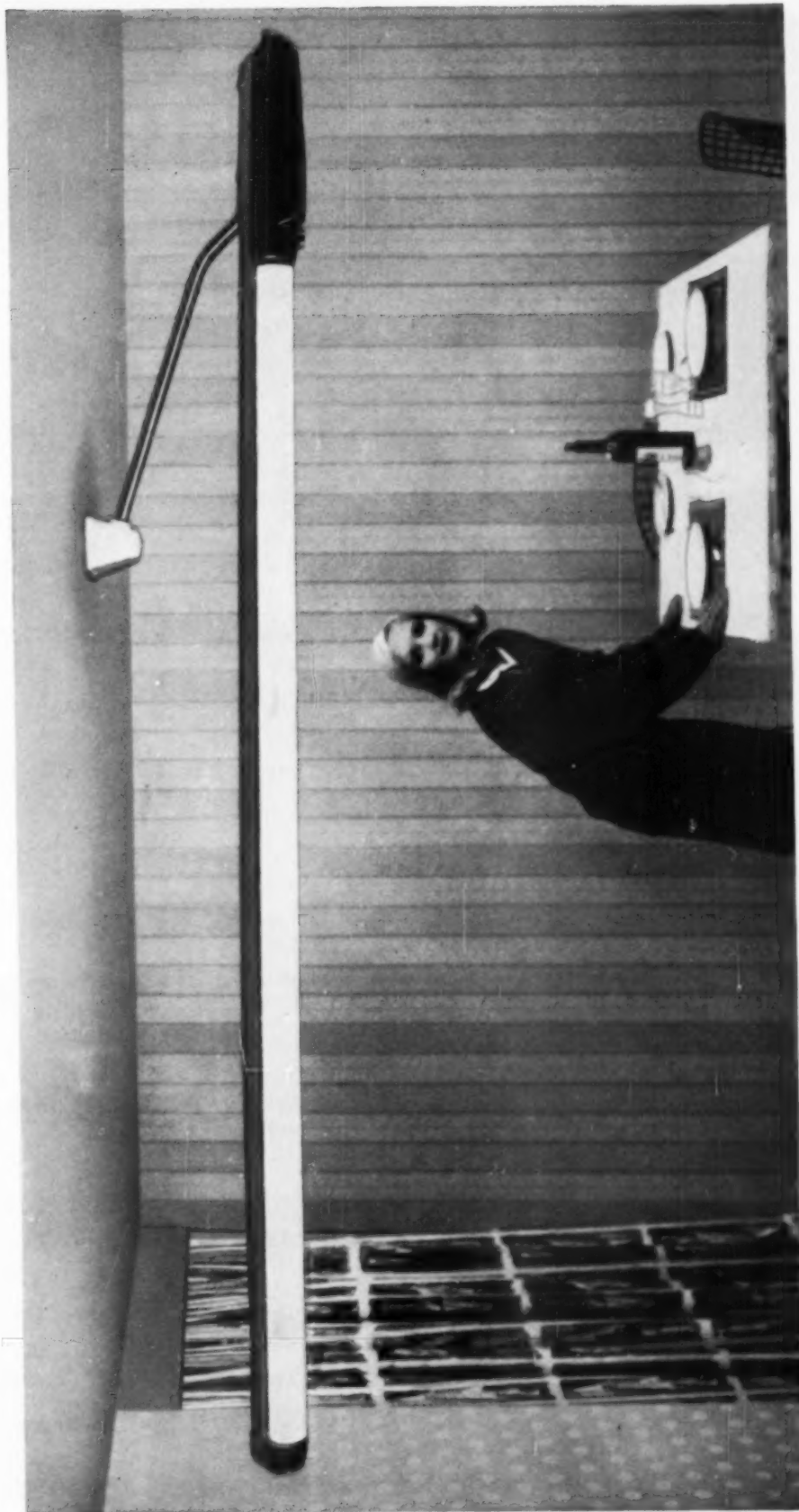
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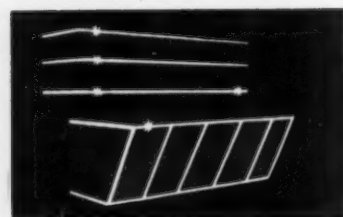
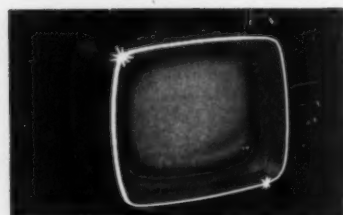
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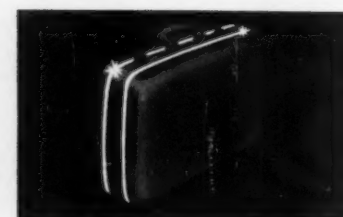
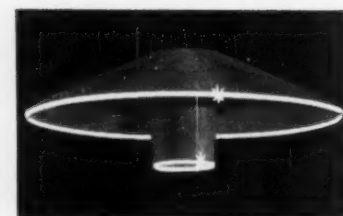
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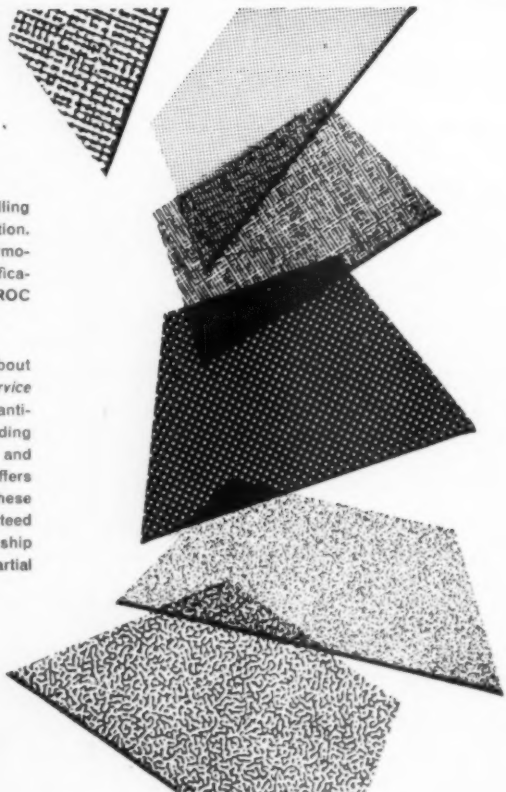
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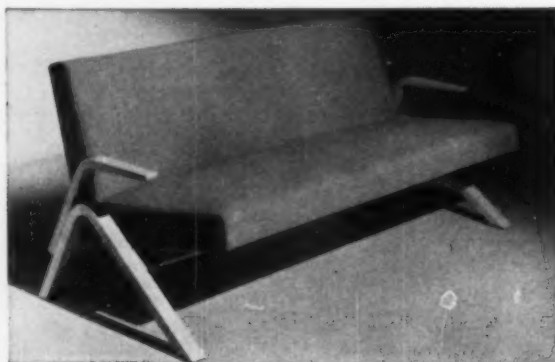
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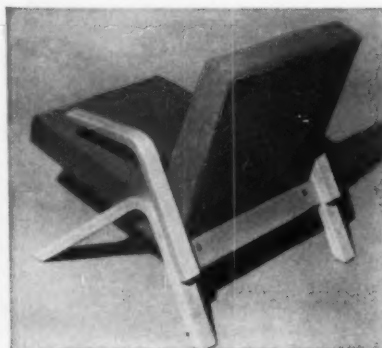


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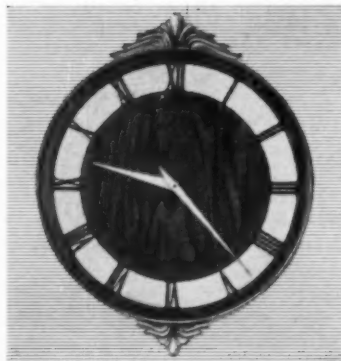


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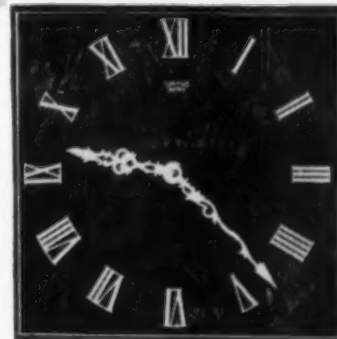


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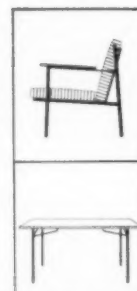
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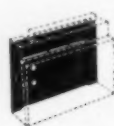
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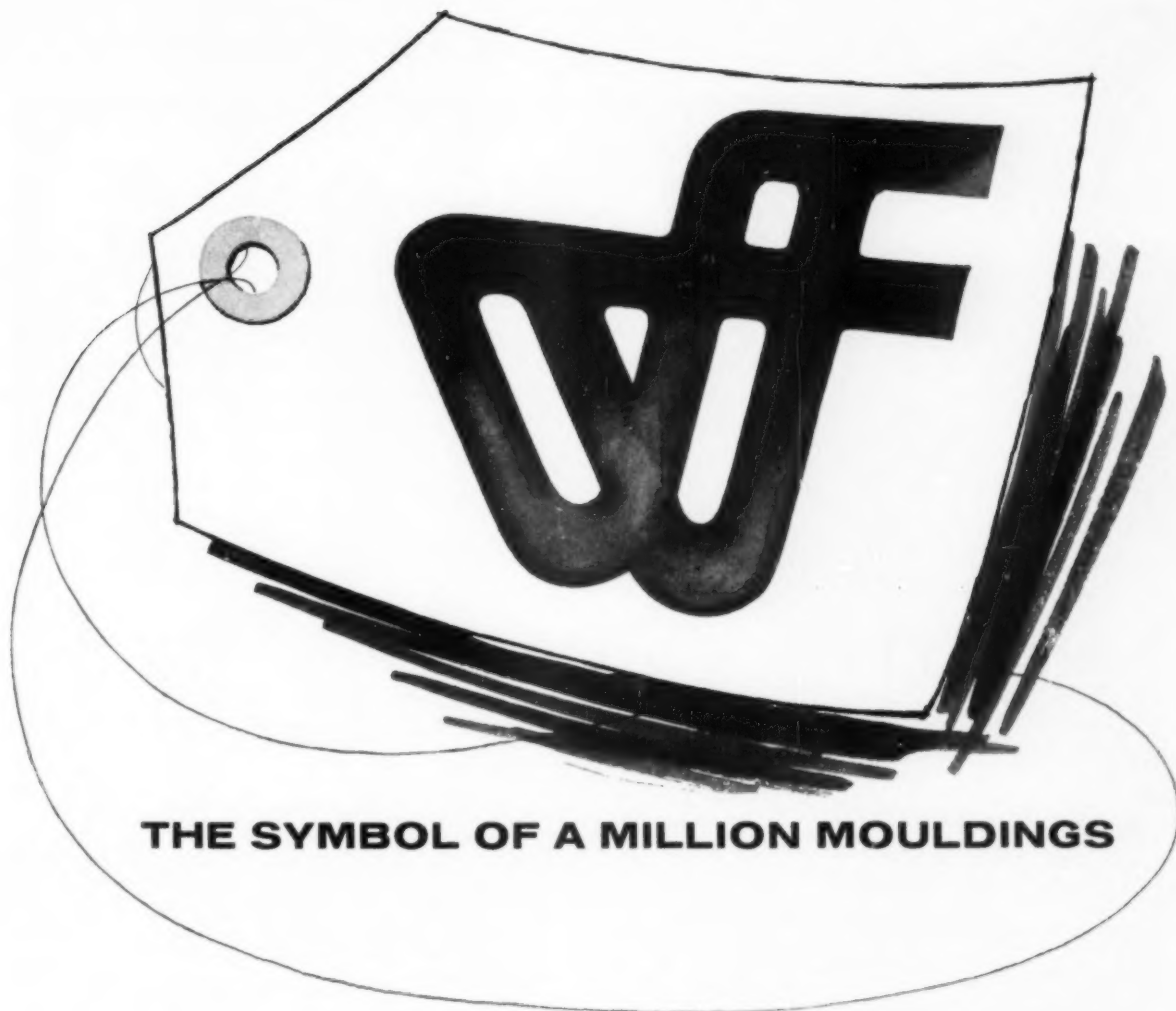
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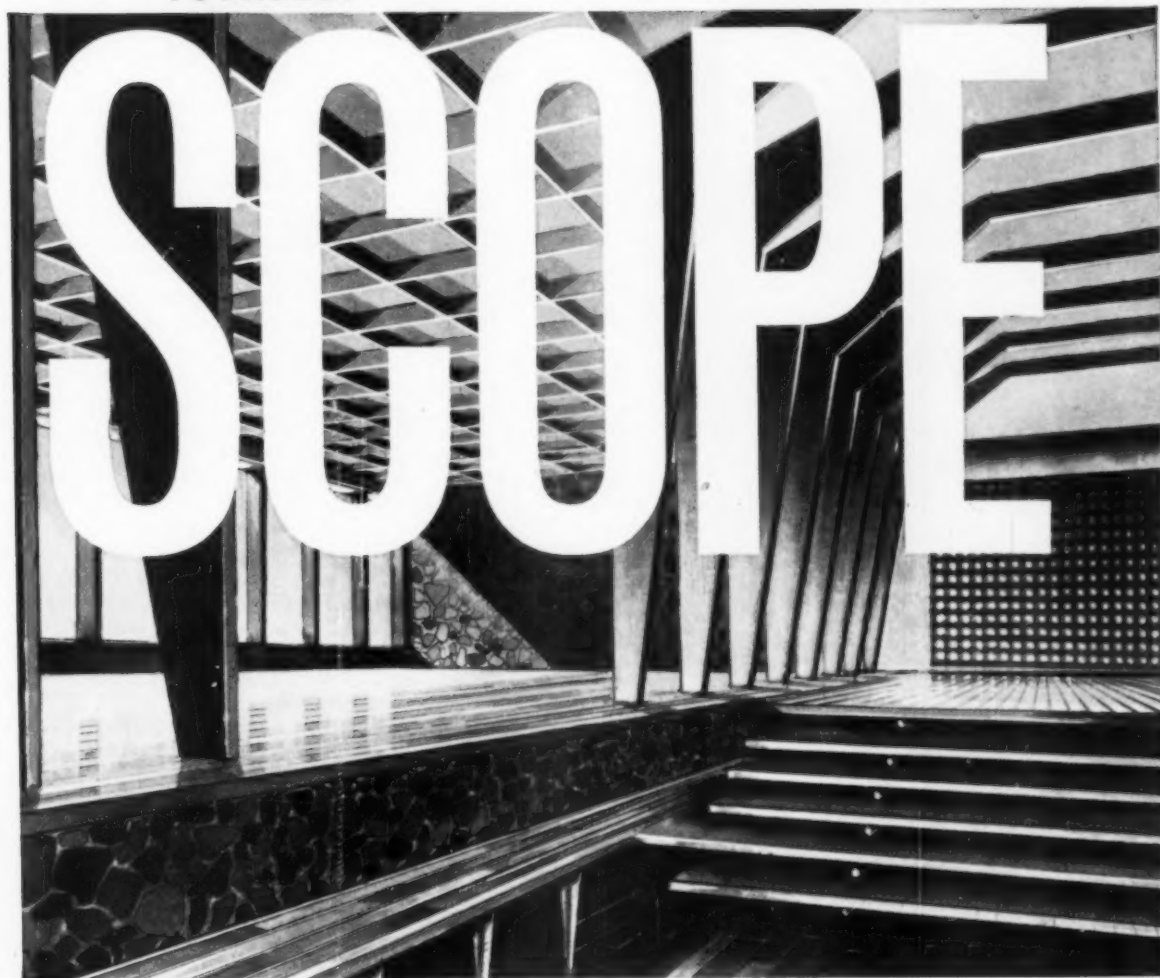
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If you are a manufacturer the industrial division will consider your products for inclusion in 'Design Index' – a step towards inclusion in The Design Centre – and will advise on design policy. There is also a liaison officer for the engineering industries, and an officer who can offer specialist advice in the bulk purchasing field. If you want a designer, the Record of Designers can help you. Your requirements should be described in detail to enable the staff to supply a short, specially chosen list. A charge of three guineas is made to trading concerns in Great Britain for each list of names with short biographical notes.

If you are a qualified designer the Record of Designers is a useful place to have your name recorded (free of charge). Last year the Council received over 600 requests for designers.

If you are a retailer the retail section can give you a monthly list of new products in 'Design Index', and let you know about any special Design Centre displays that can be reproduced in shops and stores. It also holds conferences and courses for management and sales staff. Parties of retail staff are welcomed at The Design Centre.

If you are a journalist the Council's press office will help you to find out anything you want to know about design in Britain and will also keep you in touch with the work of the Council.

If you are a teacher there are many ways the education section can help you. It supplies information and material to schools, education authorities and other bodies interested in design. It offers advice on careers and training in industrial design, runs short courses for engineers and arranges group visits to The Design Centre for schools and other organizations.

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City of Leicester Education Committee

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CLASSIFIED

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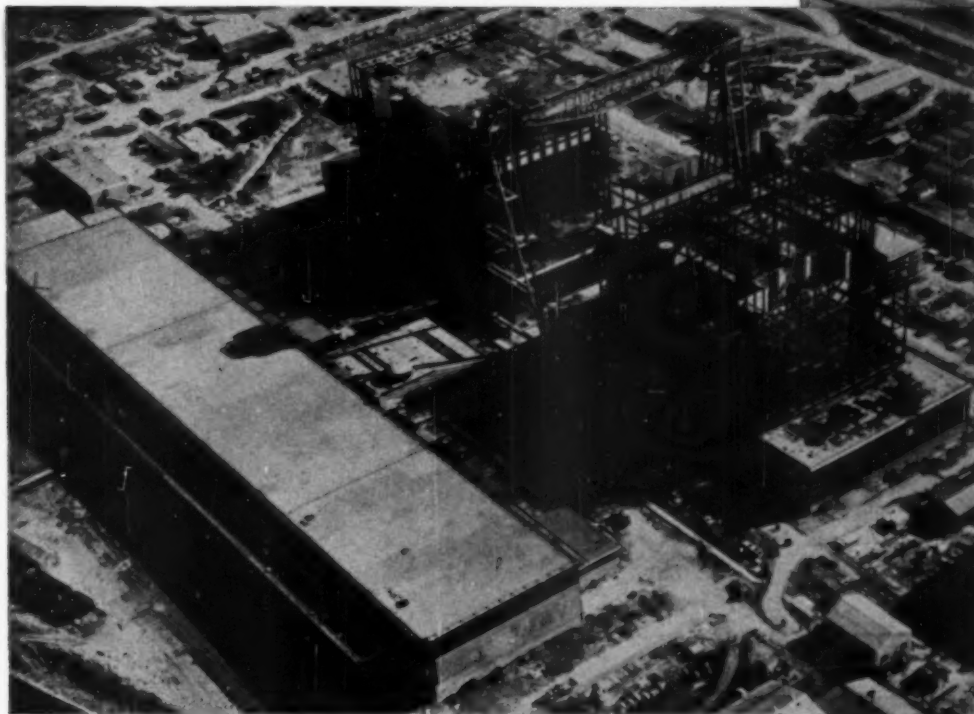
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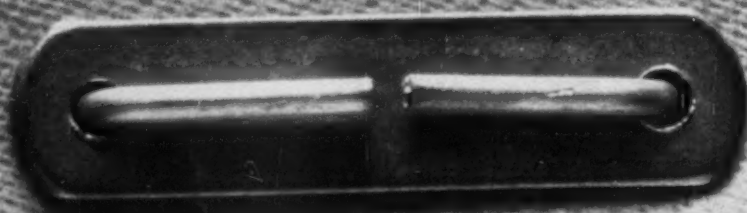


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